

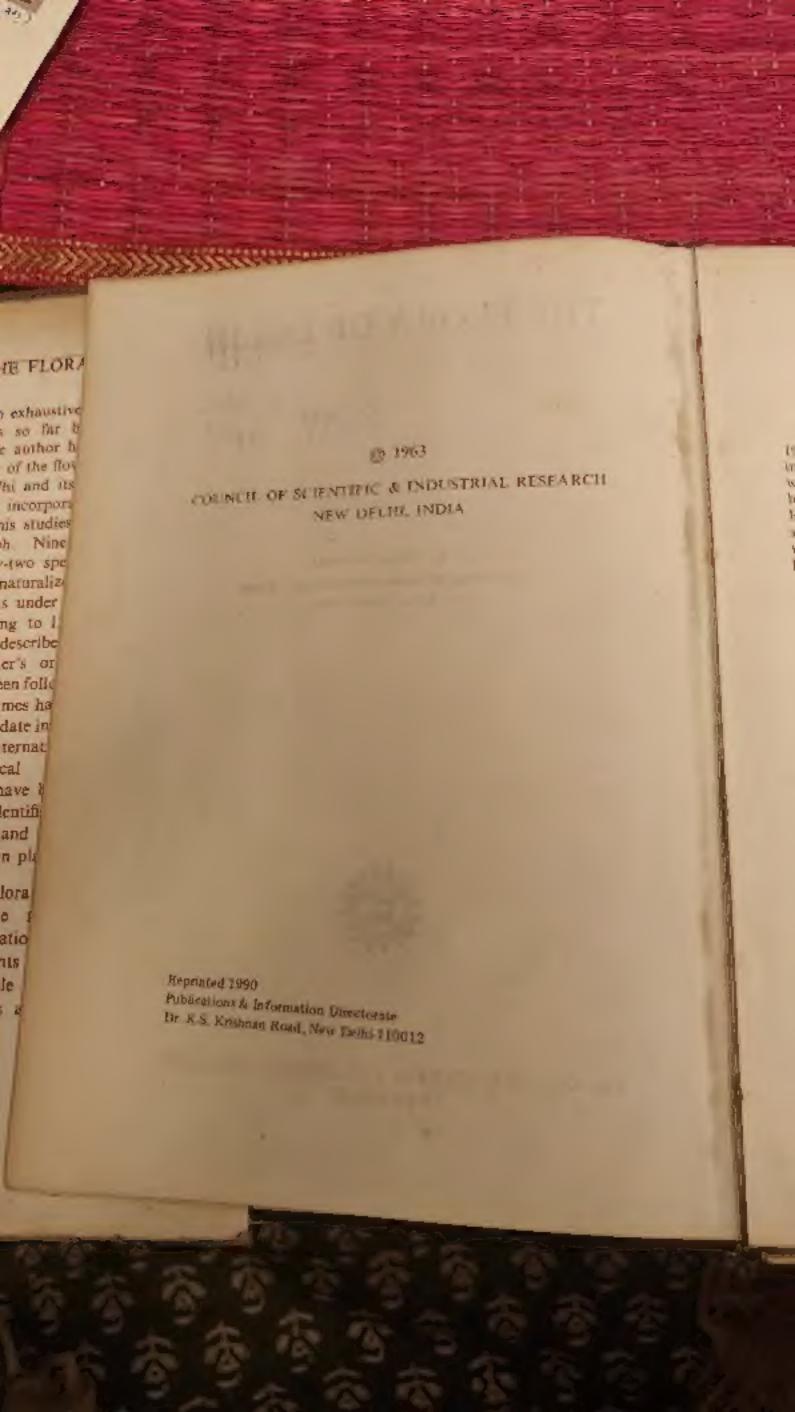
bonto distanges

## J. K. MAHESITWARI

Central National Herbarium, Boundeal Stories of India Indian Baranic Garden, Howeak



COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH NEW DELHI



# FOREWORD When I joined the University of Delhi as Professor of Bottom in March 2, my first requirement was naturally a "Plora of Delhi". None was out of print. This seriously happened and looker Gangood Plant

1949, my feet requirement was robustly a Fora of Dilli. None of the existence and over Diable's Fora of the Lipper Gaspene Plant's was our of print. This sectionally hampered one tentions and harring of botany. In the department we are received frequent requests from Hakura, Vaidyar, tradesment and foreign matters to identify various sportments from time to time. I therefore tried to time a student who would take up this job carnetty. D. J. K. Maherhware who and baken his M. Se, degree in botany in 1953 offered himself for this work and the C.S.I.R. responded by sanctioning a scheme of research on this topic. J. K. Maheshware worked with great industry and cothoniasin for a little over three years and intally prepared a manuscript which won him the Ph.D. degree of the University of Debt in 1951.

During the fast few years this meaning has been further revised and improved and in 1962 it was given to the USIR for publication in book form. At the time of writing this percevoid, it is accordy in the page proof stage and should soon see the light of the day.

Or J. K. Maheshweri has spared to point in making this work as complete as possible and has provided owns held notes which are based on personal experience. He has also tried to keep pace with the many changes in nomenclature that have come about in recent years since the publication of Hooker's "Flora of British India".

The arrangement of families generally follows flentham and Hooker's system. English and local names have been given wherever possible for the henefit of agriculturists and others and there are useful notes on the local uses of the plants.

In spite of the care which Dr J. K. Maheshwari has exercised in every way, there are bound to be some errors and omissions. Dr Maheshwari will appreciate having these brought to his notice by the users of the Piora.

Department of Botany University of Delhi Delhi-6 May 15, 1963

P. MAHISHWARI



#### CONTENTS

				3.0	0.00
Foreworn					
ACKNOWLEGGERENIS					
ADDRESSATIONS			111		
Na Carolin Street, or other Control					
INTRODUCTION		***		-4	1
Main Geographical Feature	25				1
Climate		***			2
Rainfall					3
Temperature			***		3
Relative Humidity	Page 1		-	***	3
Wind	****	340	Pet I		4
Thunder-storms, Squalis	Dinctes	Arrenz refe			4
Hail-storms, Fog. etc.			211		5
	100	***	+1-		125
Geology		100			5
Topography and Soils	447	911	-		6
Khadar (Riverain Zone)				-	7
Hangar (Area Irrigated )	y Wells	and Cana	ls)		7
Dabar (Low-lying and R				4	8
Kohi or Pahari (Hillside		64	111	-	S
Previous Botunical Explora	tions		100		9
Present Study			- 100	100	10
Methods			100	100	10
	- Diala	Work			31
Difficulties Encountered	iu i icia	A3 131 K	775		11
Herbarium Work	100	140	***	100	
escription of the Vegetation	n Types	***	***	100	12
mt. Manufacture and Physics	arla Co	manuellian	of the Ric	ige	42
The Vegetation and Flori Biotic Interference and D	egenera	Hon of th	e Forest	-51-	1.5



PACIF THE FLORE 16 Vegetation of Junious River, its Basic and Leibankments Sectional Vigetation 19 le exhaustive Hora of Ponds, Lakes, Marshes, Canali and its Northis so far I 20 hourseout he author h 21 Ruderal Formations y of the flot the and its Cultural Plant Communities s incorport 25 Food Crops his studier 27 Garden Crops ph. Nine 28 Fruit Plantations and their Wild Flora y-two spe 31 Introduced Flora of the State naturaliz is under 31 Roadside and Avenue Trees ing to I Trees and Shrubs of Public and Private Gardens, Lawns and describe 31 Recently Introduced Weeds 3.4 er's or en folk Statistical Synopsis of the Indigenous Flora 34 mes ha date in Notes on the Flora 36 ternat Nomenclature 37 cal Citations and References to Plates \_\_\_\_ 38 Lave Keys, Order of Families, Local Names, Measurements, etc. 38 entifi CLASSIFICATION and 39 2 pla Dicotyledones 39 OTA Monocotyledones 47 FAMILIES Da 330 15 Dieutyledones (1-97) 330 Manacotyledoner (98-120) 331-407 SELECTED MIRLINGHAPHY INDEX 409 419

3

3

# ACKNOWLEDGEMENTS

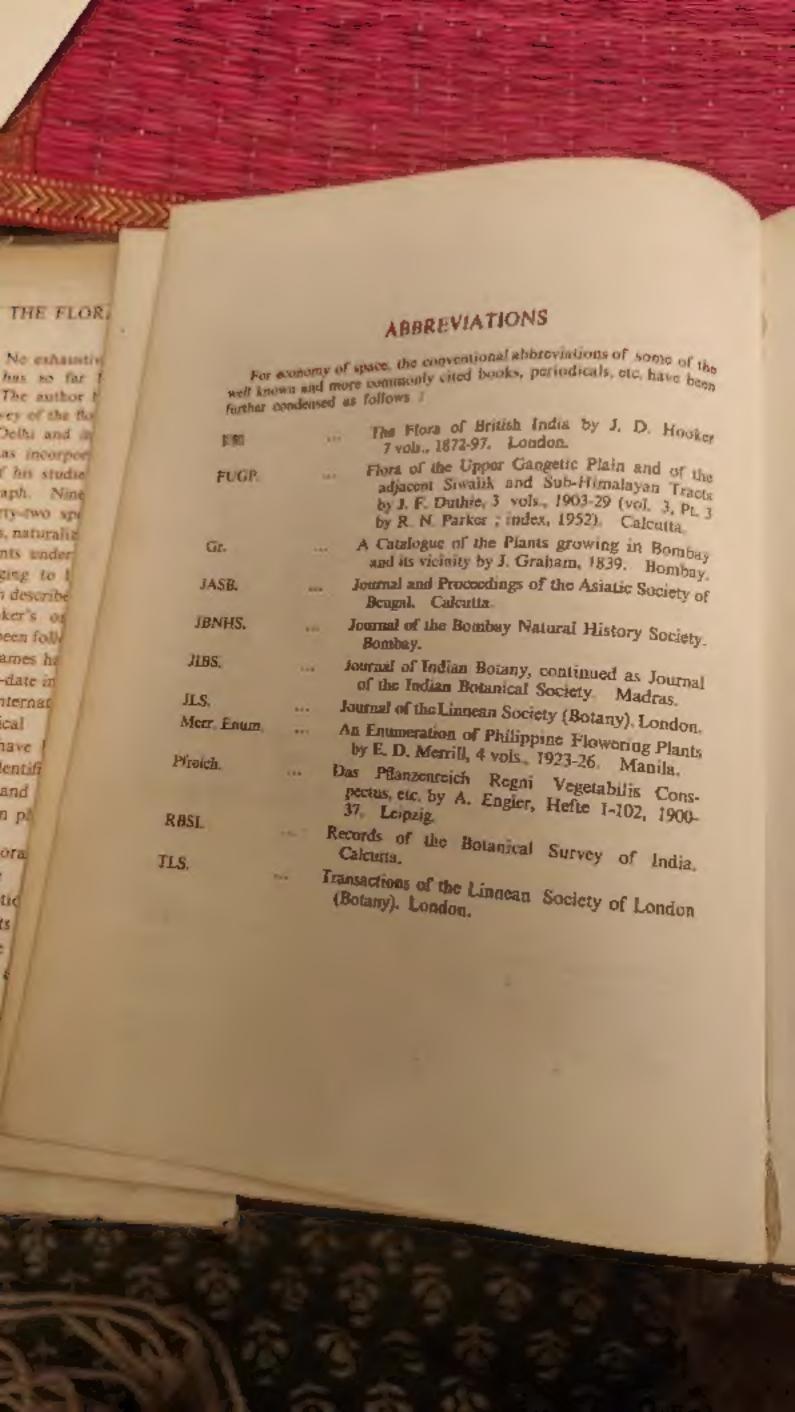
Maheshwart Head of the Department of Bosany. University of Della, for his kind supervision, useful suggestions and granting all facilities during the course of this investigation. To Rev. Dr. it Santapau, Durettor, Botanius Sorvey of India and Dr. B. L. Burtt of Royal Botanic Garden, Edinburgh, I am especially grateful for reading through the manuscript, offering valuable comments and solving many unmericiatural problems.

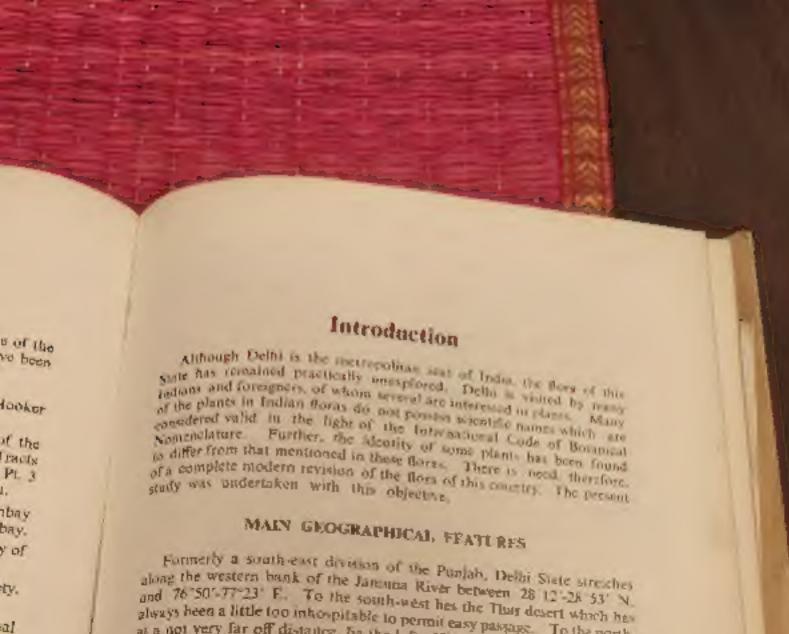
Orvision of Forest Botany, Forest Research Institute Dehra Dun for the facilities provided to work in the F.R.L. herbanum and for help in identification of some specimens. I also place on record my sincere thanks and appreciation to Dr. B. M. John, Reader in Botany, University of Delhi, late Shri A. Percy Lancaster, former Director of Horticulture, Central Public Works Department, New Delhi, Sarva hiri B. N. Sastin, K. Kashyapa, S., B. Deshaprahhu, and V. N. Chhibber of CSIR, New Delhi; the Director, Indian Meteorological Office, New Delhi; the Soil Conservation Officer Delhi; the Superintending Engineer, Western Jamuna Canal, Delhi, and to the authorities of the Royal Botanic Gardens, Kew, England, and of Rashtrapati Bhavan Gardens, New Delhi, for their help in various ways.

I am much obliged to the Council of Scientific & Industrial Research, New Delhi, for a grant towards this investigation.

Central National Herbarium Botanical Survey of India Indian Botanic Garden Howrah April 30, 1963

J. K. MAHESHWARI





always been a little too into pitable to permit easy passage. To the routh. at a not very far off distance he the lofty Himalayas. To the north-cast fies the plain area on the Indo-Gangetic divide west of which are the plains of the Indus. Immediately to the south running in N.E. S.W. direction is the Aravalli Range, the last tail end extension of which enters Delhi from Gargaon; while to the east lie the fertile Gargetic plains. Delhi thus occupies a unique position in the form of a galeway between the That desert, Aravalli Range and the Himalayas. The tract is located in the north-west Indo-Gangetic alluvium, particularly the Januaria alluyour. Considerable diversity of physical features occurs in the State. In fact the physical configuration of the country affected the routes in such a way that they tended to pass through this gateway. thus making Delhi the potential focus of routes from contrasting zones of physical environment. A branch of the Western Jamuna Canal (East Circle) drains through the district. The Western Jamuna Canal is the oldest irrigation system in the Punjab and takes off from the river Jamuns at Tajewala Head Works, about 241.4 km. from Delhi.

5

With the transfer of the metropolis from Calcutta to Delhi in 1912, a new minor province was created for administrative convenience covering an area of 1497 sq. km. out of which 1297 sq. km. are occupied by the Rural Area and the rest by Urban Area. Delhi State comprises a



THE PLORA OF DELIN ions narrow strip of territory along the Jamuna, which formed particle and 65 trans-Jamuna villager, formerly, part long narrow sing of territory and 65 mans-Jamuna villages, formerly Design of the Old Della district and 65 mans-Jamuna villages, formerly in the or the Old Della district and 65 mans-Jamuna villages, formerly in the of the Old Octor district and United Pradesh. The elevation of the State on Account district of United Pradesh, above sen level. The president by Afterial district of Ultar France above sea Sevel. The greatest length the average ranges from 213-219 m. above sea Sevel. The greatest length the average ranges from 32 and 48 km. respectively. The area is bounded. the average ranges from 11 and 48 km, respectively. The area is bounded on the and breadth are 13 and 48 km, respectively. The area is bounded on the FLOR and breadth are 13 20d 48 km. the river Jamusa which separates it from out by Karnali on the east by the river Jamusa which separates it from out by Karnali on the cast by Bolandshahr in the Uttar Pradesh. north by Karnali on the cast by Bolandshahr in the Uttar Pradesh; on the south by Gurguen and on the west by Robiak. **Abustiv** 10 wew Dehi, about it km, from its centre to the south of Shahjehang. o far vew Dehi, about it ken, from 1911 and occupies an area of fort in Delhi, was first established in 1911 and occupies an area of 11 withor. fort in Delhi, was tirst established alluvial plain of the Jamona sleping the Ba 85 sq km. If is situated by Radiating on all sides are broad straight and I greates with decorative trees and residential buildings with spacious K corpor have and proced shrubbery. The main government buildings have Studie been placed on the rock which is a spur of the main Delhi Ridge, Nim been placed on the role appears to be surrounded by a dense grove U 50 6 of trees. JFR . nder CLEMATE 10-1 ribe Broadly speaking the cleante of Delhi is mainly influenced by its remote inland position and prevalence of air of continental character, 0 which is characterized by extreme summer heat alternating with great oll winter cold. It is unfavourable for the growth of inxoriant vegetation. h Only during the three mensoon months of July, August and September, 11 sceame air penetrates the country up to region of Delhi. The climate at is of a semi-and nature due to marked diurnal differences of temperature, high saturation deficit and moderately low rainfall. The descrit area of Rajasthan to west and south-west and the Gangetic plains of Uttar Pradesh to cast, across which the monsoon air travels and reaches Delhi, have their respective shares in affecting the climate of this region. Extreme dryness with an intensely hot summer and a cold winter are features. which are associated with a sweep of air from a westerly or north-westerly direction, while the influx of air from the easterly or south-easterly direction usually causes increased humidity, cloudiness and precipitation. The climate is markedly periodic and is characterized by a dry and Increasingly hot season from March to June, a dry and cold winter from October to February and a warm, monsoon period from July to September. Corresponding to these, there are three distinct vegetational seasons. The cumatic factors that appear to be of greatest importance are : Temperature Relative humidity Wind

Thunder-storms, squalls, dust-storms, etc. Hail-storms, fog. etc.

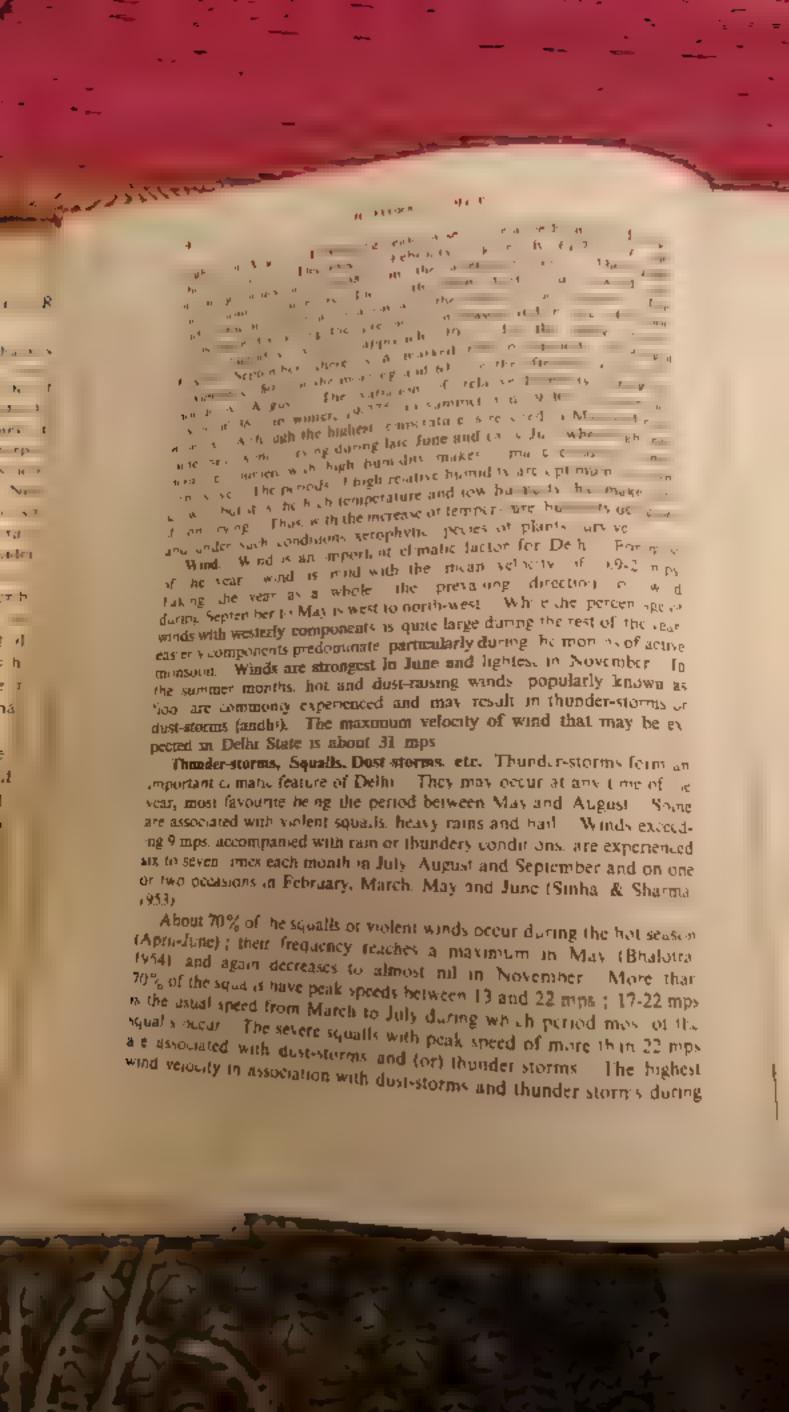
Rainfall. The arrival of the south-west monsoon in this part of ladia is regarded as a meteorological event of considerable importance. A study of this event revealed that the maximum number of occasions of onset of monsoon occurs in the first week of July and last week of June (Bhullar, 1952). The wettest period of the year is the last week of July. when the Najafgarh Drain and other ponds and puddles become filled with water. The normal annual minfall at Delhi is 66.6 cm. of which nearly 80 % is recorded during the period of three months from the middle of June to the middle of September. The remaining 20% of the annual rainfull seems to have slightly increased during recent years, at blooker and Thomson (1855) gave the rainfull figure at Delhi as 54.6 cm. Considering the year as a whole, 90% of the days are rainless, the monthly distribution varying from the maximum number in October and November to the minimum number in July and August. The month of November is driest, during which only on one occasion in 3 years, a rainfall of 0.25 mm, was recorded at Delhi. The highest annual rainfall at Delhi was as high as 153 cm. in 1933, the next highest being 128 cm. recorded in 1862. The lowest annual rainfall was 20.6 cm. in 1868; other low amounts recorded being 29 cm. In 1928 and 26 cm. in 1929.

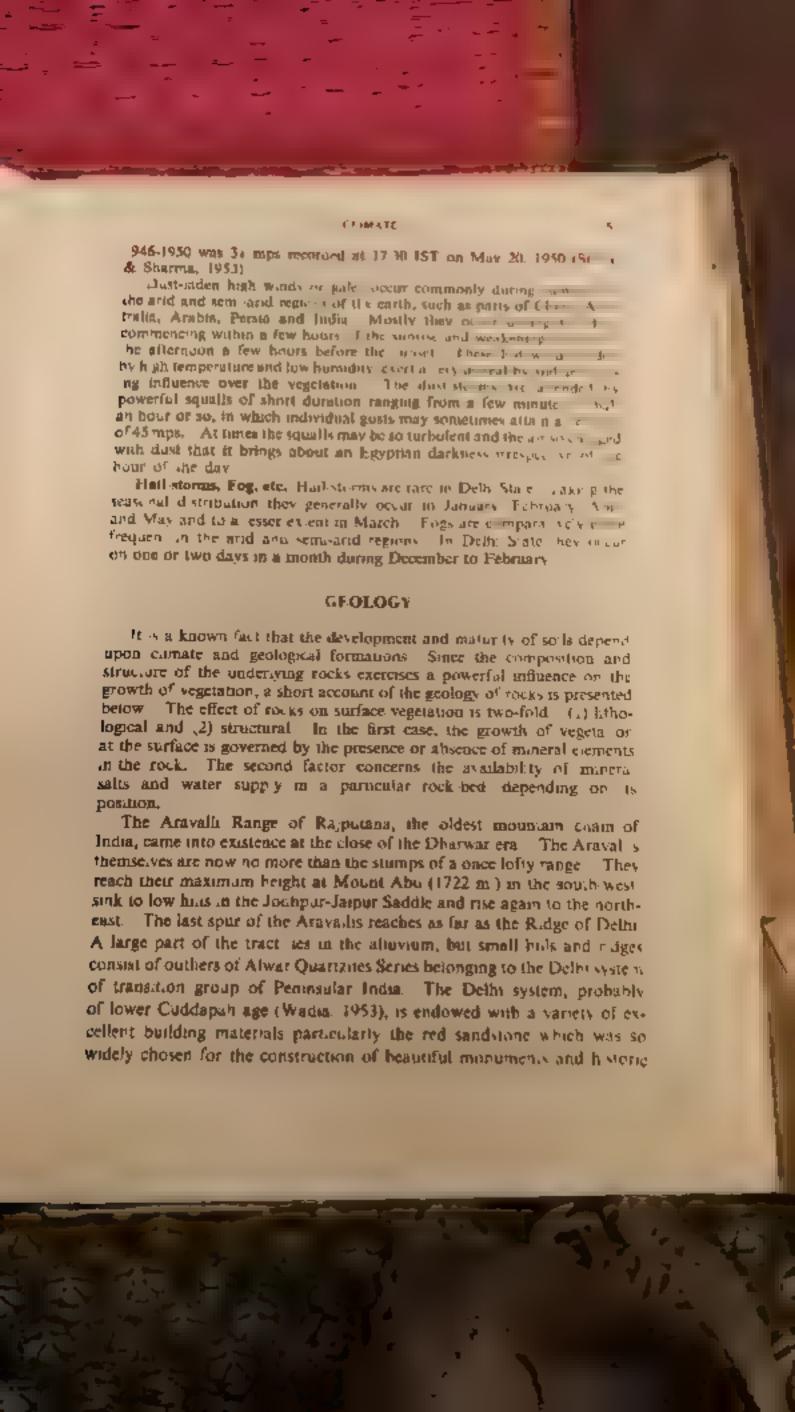
As a result of uncontrolled grazing and deforestation, rain has caused extensive soil erosion. Depressions and deep ravines have been formed on the hill slopes of Aravalli tail ends, near Mehrauli, in the Jamuna River basin and in the plains. Unless steps are soon taken to check the crosive action of rains, the gullies will encircle the fertile lands and render

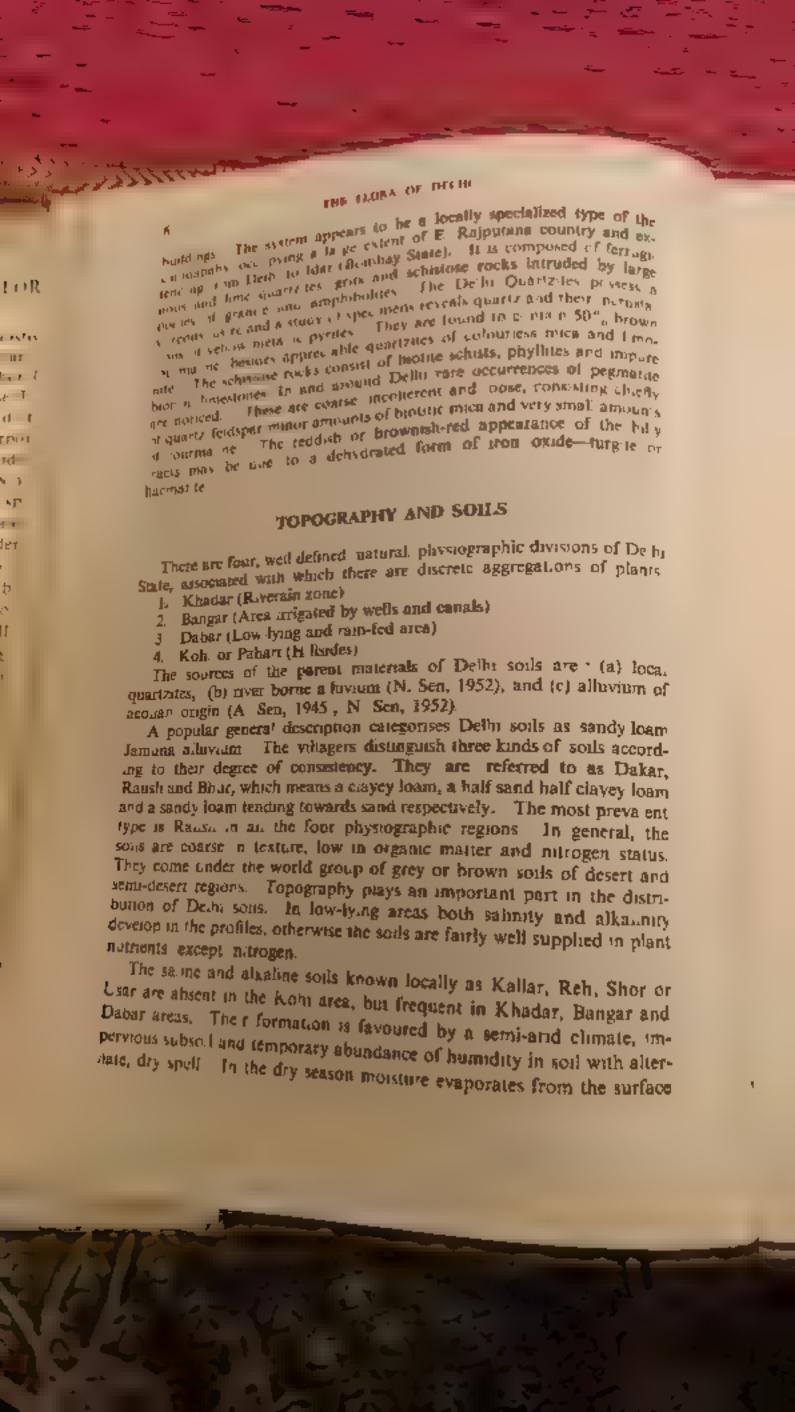
them unproductive.

Temperature. One of the most characteristic features of the climate of Delhi is the great extremes of temperature. The heat during the summer is intense and scorching, the temperature rising as high as 46°C. (June 19, 1939) during the month of June. On the other hand, the cold during the winter (December-February) is severe and the temperature goes down as low as -0.6°C. (January 1935). January is the coldest month of the year. In this month the mean maximum and mean minimum temperatures are lowest being 21.7° and 6.1°C. respectively. Moreover, in the rear of some of the winter disturbances, which traverse North India at this time of the year, the temperature sometimes reaches the freezing point. The month of February is slightly warmer and temperatures start rising by the middle of March. The hot season prevails during the period of April to June. The monthly mean temperature is highest in Delhi in June when the night temperature is also at its maximum, although the day temperature is highest in May.

Relative Humidity. Relative humidity is minimum in the dry weather months: April and May and maximum during the monsoon months: July, August and September. It is lowest in April-May and







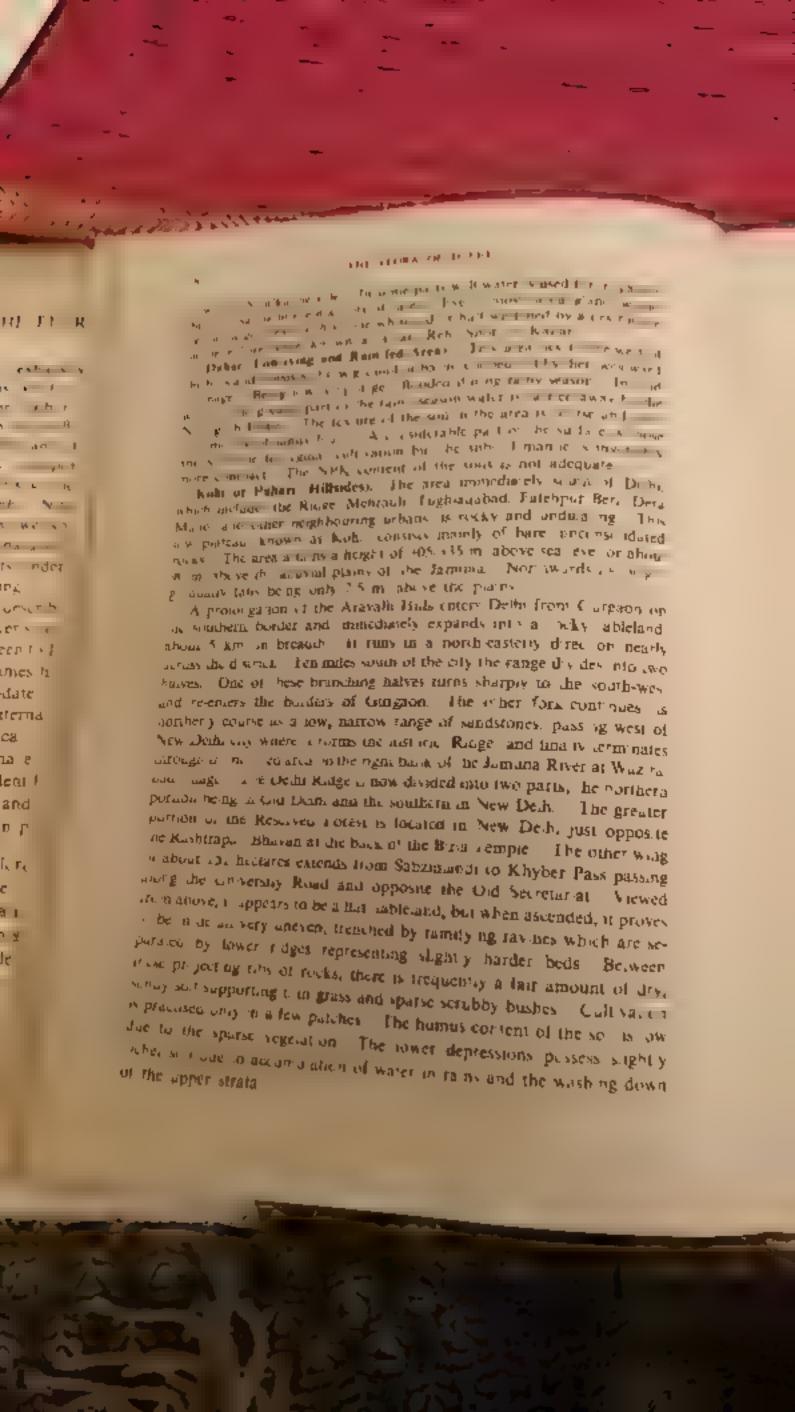
injury of the soil and in these there forms an account to the trainer of the scanty rainfall is insufficed to the trainer of the soils assembly to the trainer of the properties a whitch alkaline efflot the soil increases the capital of the product the ground develops a lastrous appearance. The best of a contract the specific character and carbonates of waters in a sink place. Apart if one the direct operations effects of at almost a large product of anits on plant the toe presence of sails makes be all very appearance to water, so that in years of good tabulat patches of Kaliar are superficient water-logged.

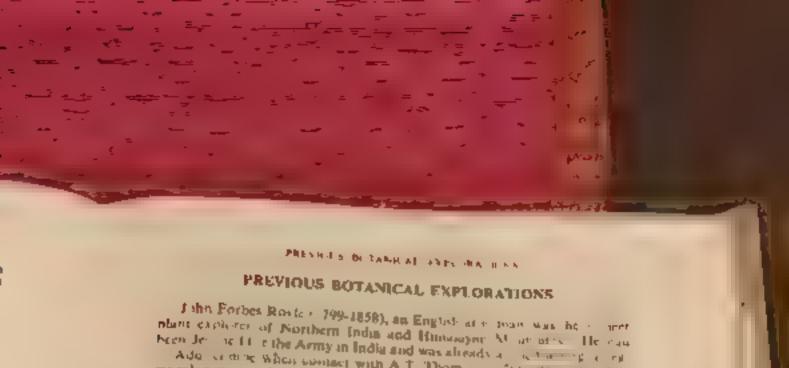
Rhadar (Riversia Zone). It is a strep of land adic mag me a re-Jamuna and hounded on the other three sides by he Grand Flunk Remain (West), the Civil Lanes (South) and the boundary of the State, North) It is a low-lying tract covering an area of 30562 bectares cut of which enty 38% is under ou fivation. According to the District Guzetteer of Delhi (1883-1884). Khadar may be defined as soil which at some one or other lay either under the river or to the east of it. At what the and how the river changed its course is not known, but it is believed that the change was quite well marked. The Jamuna riverain has wise sands beds flanked by high banks and is subject to annual inundation. The river enters the State at a heigh, of about 216 m, and leaves if at ahou. 192 m above sea level. The seft bank of the river is used as a pasture ground and the right bank is liable to serious flooding. By a recurring deposit of the detritue and sait brough, down by it from the Tertiary region of the outer Himalayas, the river raises its bed. However, during summer and winter months the river bed in Delhi region is excavated and lot of silt is being removed annually

The texture of the soil varies from coarse sand to clay and the clay content decreases with depth. The soils are base-saturated and their pH is on the alkabne side. They are low in organic matter most of which is confined to the top layers alone. Two important factors affecting crop yield in the area are high degree of salimity and waler logging. The soils belong to 'Solonchak' group (Raychaudhum & Sankaram, 1952) and their position in the world group has been described as intrazonal, halomorphic, structureless and saline-alkali (Raychaudhum & Tripathi, 1953).

Bangar (Area Irrigated by Wells and Casals). This is an area which in old times lay immediately to the west of river Jamuna. At present, the Western Jamuna Canal runs throughout its length and provides sufficient irrigation. The soils of Bangar are more fertile and productive than those of Khadar, being of a firmer consistency. Their texture is silty sand or loam. The crosson ratio of the soils is high showing a low resistance to crosson. In general, the pH of the surface and substitute layers of this area is roundahout neutrality, though at some places it is





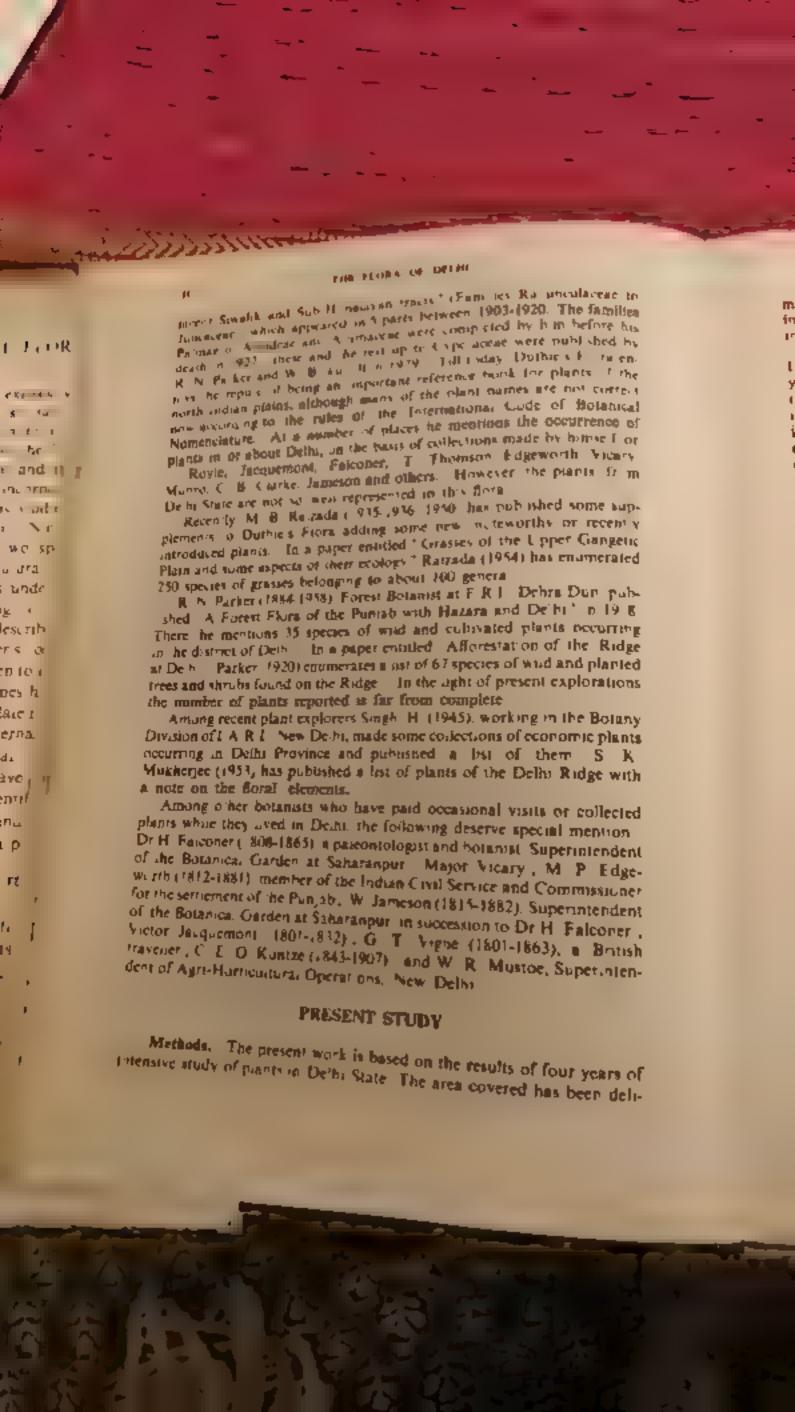


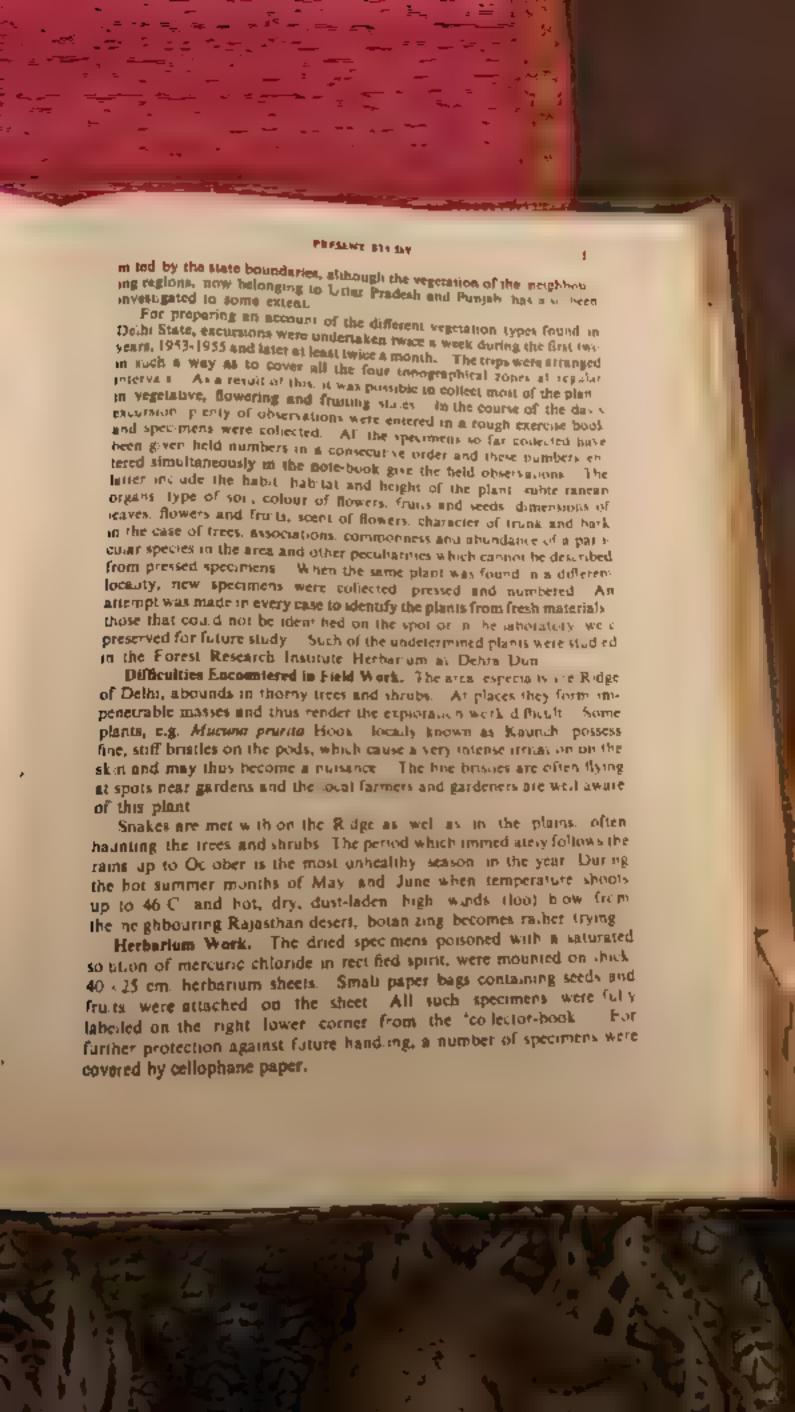
been Jer nell to the Army in India and was already a section of a re-Ado to the when contact with A T. Thomas has be plassed by the pla as Curator of he new Bonamual Cra den at Sahara pur in 1823 and as his producer is countried the dutie of a Suip in a bit of Subntendent in the garden. The results of the lie with we a president in him arter his returement in it medical since if the Hodar's and his house his of the Natural History of the Homatayan Mountain and of he Forand Cushmere a wirk in 2 quartity dumes a disable of page 5 space of ele en parts be ween Sentember (83) à di 540. The life o una dales of publication of different parts of the work has a been used as teal of W. T. Steare (194) I feet add of the Action of the whole feet of a fix that are the whole abouts of which had been unknown size of gleen contact covered in Liverpool when the Lacepea Moseum vices is a party whole of the condition for he museum a mention of the service A south uch (Stansfield, 1953-1954, 195 Be de Ricip le trolla ser his pignity to the Linneag Society and a singletine was lest J. D. Histor, for examination and impussion may have plants are now housed at the R sa Bean C Gardens, New, Engard J F Duthie in 1876 found some bundle of Royle's plants at Saharanpur and these have been preserved at Dehra Dui. A perusal of Royle v. illustrations shows a howek you much a low price system. flora as an attempt to ascertain the geographical division of piants in relation to climate and elevation and their uses. Hooker f and Thains in in the introductory essay to their bora Indica complemen. Royal as the pioneer to establish a floral after to between the ageignion. The easier and western compinents of the Old Wind. White on a holiging my stonfrom Saharanpur to the hi maurian Moun a os and Kashiwe. Hoyle and his collectors spent a good deal at time in De hi. Thus, in front 11.55 species of plants in his book, there are comments like in the neighbour. hood of De hi', as far as De hill between Saharanpur and Deihill etc.

In his book on field Punjab Plants is 869. It Stewart the late Conservator of Punjab Forests, gives the botanica, and vernacular names and uses of economically important trees, shrubs and boths occurring within the Province. He records 24 species of pain's from or about Delhi district. However, this book has its importance more from a druggist's point of view.

J. F. Duthie (1845-1922). Superintendent of the Botanical Curven at Saharanpur, wrote 'Flora of the Upper Gangetic Plain and of the ad-









## DESCRIPTION OF THE VEGETATION TYPES

FLOR

A # 3 A FEW

. gr

nu far on

he #

and at

KA EPA

51.30

⊬o չր ԱՐ#≀

under

10

ier h

S 2

foll

s h

te i

na,

e

ш

d

3

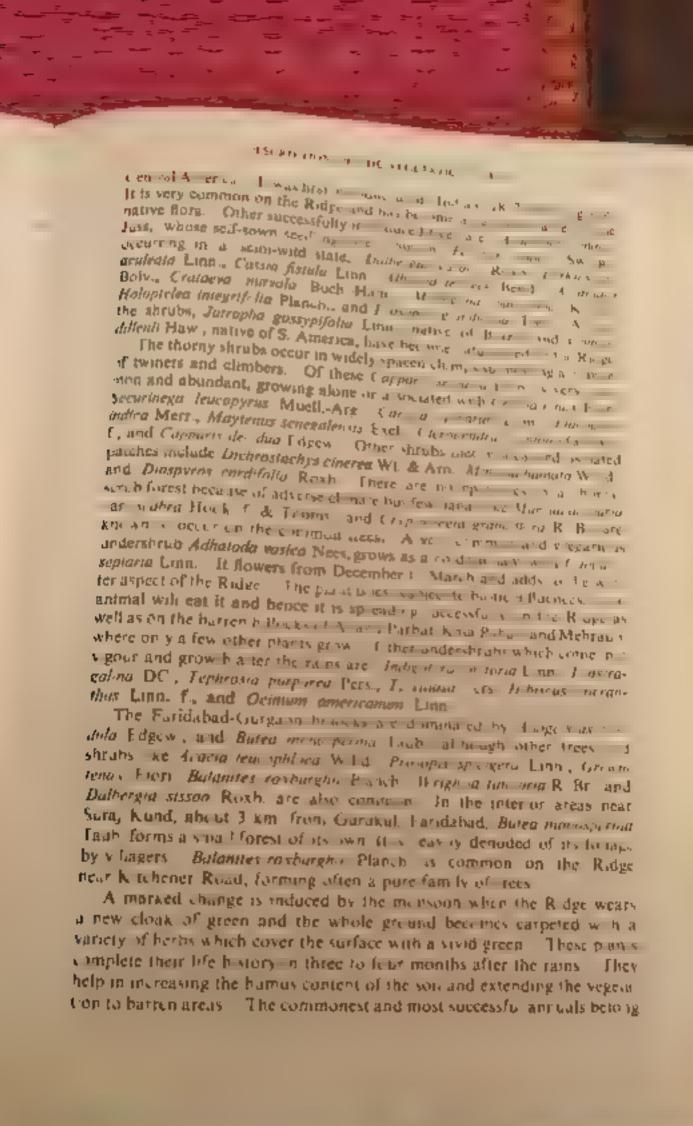
NI

The Vegetation and Floristic Composition of the Ridge. The Ridge of Deck and a neighbouring hits the is represent he hards of a strong the analysis which is a trivial thorax secondary edes grantion who was as rawhy or an and open so the circ. Such free a reward a new discipline the where reward a range cauges from \$0,000 cm. The whole are wide a spin of service and appearance to that the trees and abruba are wide a spin of service appearance to that the trees and abruba are wide a spin of the him he regetation consists of co-dominant spinning which and trees, canable of great drought resistance. It may be classified until we rategories as relieve to the permanent appearance occurring throughout the rear and the trees there is regetation consisting to the area growing mainly during the about trains season.

Corresponding to these the veretation of the Ridge presents two dismet, seasons aspects. (I) the summer and whiler aspect when the
of he trees and some of he shrubs flower and the solitis deviation by
ground cover. (2) the ramy season aspect when the vegeta on that is
best and the sou which is otherwise here between the rices and shrubs is
covered by a vivid green carpet of temporary vegetation. The latter
flower and fruit in a short time and disappear as sounds the surface aver
of the sou drier up and winter sets in

The permanent vegetation is zerophytic in character and shows various xeromorphic features such as a shock tomentum succulence, tunted growth, coating of wax, thick cuttele, protected stomate etc. The plant, occur in open, clump formations with pierry of vacant spaces between trees and shrubs. Most of the woody species of the Ruge and those growing in similar and regions regenerate regelatively by it owing cut rule suckers and coppleing shoots and some propagate even by his aralayering. Unless the stumps and roots are grubbed but the the roy forest tends to ma naun itself by producing root suckers and coppie og shoots These features appear to be common in dry situations. The noteworthy examples are Prosopis spirigero Linn., Acacia spin. Butea monosperma Taub Balanites rachurgha Planch Grewia tenas From, Capparis dei idua Edgew, Zizvphus nummularia Wt & Ara, and Anogeissus pendula Edgew. The trees comprising the percental vegetation of the Ridge are both indigenous and in roduced. The former are represented the fly by Prosopus spaigera Linn. Acaem leucophloeu Willd, A modesta Wa. A senegal W ld A arabica W lld A catechu Willd., Buten monosperma Taub Anageissus pendula Edgew Satradora persira Linn. S. otenides Doone Wrightia fincineia R Br. Cordia dichotoma Forst f. C. rothii Roem & Schult Ehresso Idevis Roxb., Tecomella undulata Secm., Ziziphus mauritiana Laink and Balannes roxburghir Planch Among the latter the most noteworths example is Protopis substora DC, an evergreez, spiny small tree hat we of the and regions of Mexico and







THE FLOR

A cabana hes 50 I read a ex the f le h and t ils no ra 784 St 20 2 арь Ми THE OWN ST s, hatur 🕛 1 5 Jude gang (c n describ okers J heen fo names h date i Interna: nical have. identif s and 100 p

Florince (\*)
icat,
lants
ible

to be fain in American having I appear to a residence by Para markets. Compared and Communities Among hem the most a room amounts tre Prisenteria chamboldea Juaq., Carchaeus aestauta totalo, Technica to a new on Cleaner viscous Lands, Franchemy portular aviews I we I rouses seros Less Ridens he rempte Mere & Sheet Burto -in when a DC - Teachesterma ampiers note R 4h Se January one is a figure the majorned I am it reaches a males I indicate Paris the high-Necs switch, mores Don Boerhand dettern I win I continue. Nighers 4 h carefres a pero Not porch control II and I find that control of the state of the sta was temperatures that a commenta forskalli Vahl a harmon a said C perus retumbres and C traceps bode C comme a 1 vo C who is both fremapogen structus Lamus He eropeg in av Rice. & Schu. Meinnen enchers racquemonts. Inch & Space ember. sergerus Vahl & calm « L nn Scottsa verra tata Bea v. Fraga I ta. Scho Oropetium thomacum Trin Frager poor beaut 1 chanen, r l. ok Digitar a se certa R ah D auto-school bleer transverticithia Rosh E compre is Aschers & Schut - De haven um annulation Scapf. Brachiseia ramosa Stanf. Tetranog a terebra Ca. s. Day toctemum aegyptum Beaus, 40 da advanta 1 55 ( c., trix I on f. Chrysopogon future Chem. Suprobeing highest Bud v. Besides, a number of annual and percent at winer, and a criticis having my e he Convolunaceae. Ascumulateae Curum occur. Pop home can und hitaceur add to the rains season aspect. the Ridge Aming the commoner are Ipomoco punto Sweet I sen unh un Jacq. I per cena c Lon. I no Roth I made a Stapl River to proceeding on Charge Inchospathes excumering I no low and corall sa logic Minimizer maderaspatuna Cogn. Caviatio carnosa Gagnep. Rh, nem sita intatiqua De Croptovegio grandiflora R. Br., Pergularia daemio Blatt. & Met. Tensma patina Craib and Peniatropis spiralis Decre

In areas where the sot consists of grave or a thir xumerite par leaf so I were the rock. Original thomasium Time, forms a dense, tufted growth, in association with Richard spland mois. All tress form a project point community on the patent rock. As the soil dries up. Richard spland dies leaving black packets af er which the grass is seen in a fruiting common either alone or associated with Coerus trineps. Indi. Melanos continus intequemonis laub & Spach, and others. Sesamum indicum Linia curvated in the parties for its oil, has become naturalized on the Ridge along roadsides and amongst, he thorax hashes and shreps, but A nongst introduced weeds. Marriage annual Linia, and stantification indicates that the three commonly in depressed areas or more often along toadsides and paths. Elymana acaute I india. a sea increase from the seaved herb, grown commonly on the Ridge and augusteril him by tracts.



in open places and shales it bulbes in grave ty constraint. And it member of he same family district option on the bound was materably amongs recently the red to a condition a contract and or to expect of words. There are before written to the Art is a to the contriction on a name of the state of the st and grown atome or american with a formation of the west and of a person and a superpression in a self-record today bears and other cases and a superpression in a self-record today bears by when may self-record today by the contract of the contract today by the cont referred as the rainy screen salt or see se unders and a see to meet ending above a majoring a size the arms some when have a remed by the flowers during the sun one as pear. Many of the he had a pearly dry up on exposed situations but he are no he he had a many and shades of trees, where the top soil is moist or a ser to be period here are also her some perential weeds which is or all to a mon, the year, e.g. Colotropic pro-cru R Br. B diamin some fera Duna Abutilon Indicum Sweet, and others. Among paids to Denie when alcula littings., a woody type flower ou during the water months s he conty one known from the Ridge on Action test with sea W.T.d. The. tae is Roxb., and Dalbergia simoo Roxb

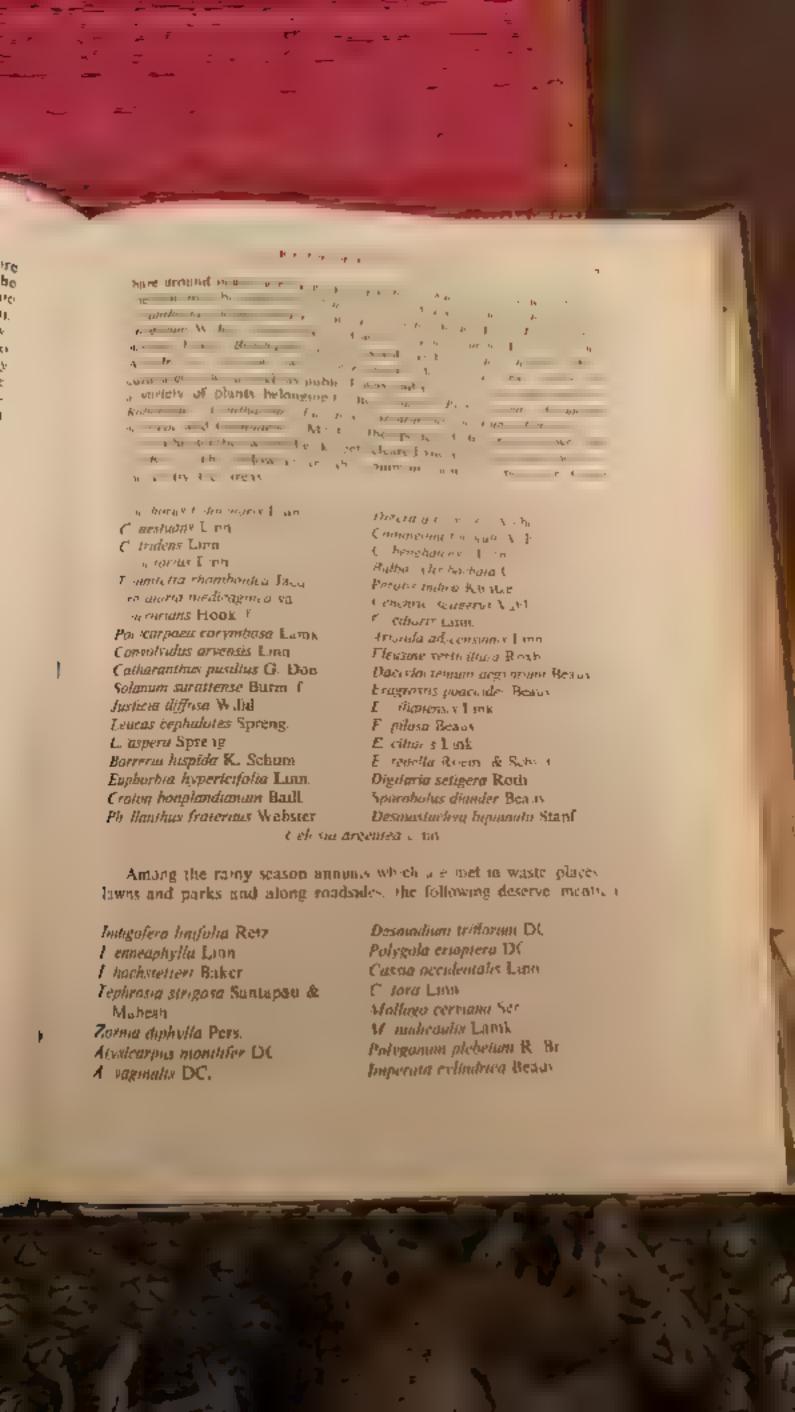
Are ong recent recode in a the seconds, sandy and the Ridge, the following deserve mention: Photo nodiflora creene Alternanthera sessilis DC., A. pungers H. B. & K., Chenerodium and a sioldes Linn, Fagonia cretica Linn, Erigiron bonariensis Lion., Cothandis axyocantha Bieb., Nicotiana planbasimioha Vev Finite dichotoma Vah.

Redic Interference and Degeneration of the Forest. In order to under stand the present condition of the vegetation and to I im some idea of the stands of different comman ties and necessary occors for the existing vegetation in the I ght of the history. Deep have I have was a first murked by the regendary at your indiapras hawh it is supposed to have flourished in the fifteenth century B (I hough it might have been there even carrier in himself has been a seat of considerable importance for many centuries. There have a ways been after intravious from the north-western side of the country and the newcomers like the native sensed very we I that the control of this nodal point was the key to the control of the country. They naturally strove to establish themselves at his gateway before they could assert their authority over the country.

It is probable that in the past the area immediately outside the G visualls of Delhi was very different from the vegetational standpoint, han what it is to be. The present vegetation of the place reflects its shadow in the foregone rise and fall of rating powers and decisive battles fought on its so is. So pronounced are its repercussions that the so called the rescript fores his characterized by economically unsound species of plants. As the original plant cover on the him as well as in the plants had been



CIKA OF DE HE to the regulation continuously is rogicalled to the second and the within a district the segretation considerable to the transition of the property of the segretation of the served by the subsiderable of the served by the subsiderable of the served by the subsiderable of the served by the ser the second of the feet and the second of the - 11 the sale of the sale of the first of the fir E FLOR to the set of the tracks of the T was one, of the series o Park the man was a second to the second to t nest on the Season Religion Process the Real factors nighta val ment of his design Rodge Police Rodge taget his his and the land to the land t St. fer to the New Desire temperature of the Party of the Temperature of the T 4 1 att. No. o. Ja otto and a mean than de agreement in the state of the second in 4 1 h<sub>e</sub> 1 and the real second sold as fact with the her and the mouth of the her and the her and the second sold De h. Ridge is to make the -31.66 to high the a second control of here or Old De h. Ridge a or n he had . . . Desire to ready rate on the faridabad, if is reduced to a more a constitution of the form \_\_\_\_ agree & engaged by the property of the sector of the party of the sector NES granding extends a print base interference contract her 4 40 With ST go aring the process of the external aring and an other transfer of the external aring the state of the external aring the state of the 41 1 4 4 utura. seem danger of the extension crosonifolia W1 & Aca. 11th in Suranger - 1, -Lan, and Melhania Intresporentia Munico concered by R vie in x19 unde F reer f Late, son memory forger Presumable they have d'samples d'. g (o) 1 60 100 to very meely. Similarly Pariter ( 9 10 meets a s es tel ate Melhand futterporentis Muneo, Gren o fine one Fore of them ers a Co er were Resh. Bosvellia serrata Rosh. Rhus m. arens Hever 4 and en fel 600 weens Wild and E photherman a Bach stam which are now found Cartia nes h commonly in Raymana, are not found on the R fee the ten they do an Y Marie 3 € less once occurred. Three of these, namely Grewin times . Just 300 4 craa Rius mesusus Heyne and Acacia catecha Walld have been exterted £ 400 from the Ridge by me, elthough in isolated patches. Similarly formers a. 6 11 1 in my mores Wi. & Arm., Missons hamota Willd., and Flavourtes indica ave 8. " Merra all characteristic of an and, scrub forest, occur only in the avec enti I . Th naiches on the southern or New Delhi Ridge. There man - do no seem (ter and. to spread to other parts of the forest. The Ridge has been out of would Par 1 пр several places for erecting halfd new and is to wonth and . In view of this protonged outling and grazing to which the Ridge has been subjected it or. is down able to make a State park and sanctuary to which the power flora ٨ 3 can be preserved Listo Seasonal Vegetation. This includes those herbs and shrubs as we ш as weeds that are commonly met with in lawns, gardens, fields and unused 1 1 for no ground. Corresponding to the three distinct seasons of the year one 100 Je. comes across water, rany and summer season annuals that complete  $\mathcal{E}_{i}(\mathcal{E}_{i})$ there for tors within three to four months. The optimizen temperature Lepl and moisture cond. sons for plant growth are obtained during the rain) season when he regerat on attains a luxument monsoon aspect. Follow-M my he first fall of carns towards the end of June or early July the almost 1000 4



HE CLOR

L exhibited

in the file

te au hor

y of 1 c 's

the and of

5 Compa

his stud

ph Nor

Y-TWO ST

r Bittera i

his unde

descr F

kers 4

een fol

umes 🛌

-date ਾ

nterna

(CBT

bave

dente

and

ол д

lor

æ

at

ρţ

olg

5

t gen

aptern anth, printegue Necs court mains in a settle stades of ancertain of gardines and neighbouring maissed at mis. Burtle, of reputation in court of a set burdle of an interest of the settle of th

Frenchis, stract is Gagany
Aprilden, indeeda gastana Capoco hi anthe cucumerina Lina
Cae una cumulatia Capa

Sugaro Rh mino ai menta Di patama Cago Marana mana Hank merina Lana Perganana mpana Bla & McC Cantroperanan hahi arahan Lana Cantroperanan hahi arahan Lana

The rail's segretal vegetation disappears the appears the rail of the other with the same appears to a sense of the rail of the sense o

Furnaria indica Pugsley Communas didyonas Sm. Sistembraum tria Euro-Argemone mexicum Linn. Vatoura pyranudata Medik Stellaria media Vill. apergula arreasa Lina. Melilona alba Dese M Indica All. Lathyrus aphaed Lian. E satious Line Medicago denticulara WAIA. Trigonella corniculate Lian T. Incusa Benth. Mela huma S. F. Gray V satira Linn Sonchus arvensus Lann & oleraceus Linn. Lounnea aspleniifolia Hook f. Gnaphalium indicum Linn Clevium arrente Scop Vernonio cinerea Less.

Luna indico DC Carda hem chaerica Wall Bergia annountede. Romb Moles para dera Lines Oxalle corniculata Luca O mariana Zucc O Medicion B B & K Paten nia supino L. un-Anagailts arrensis Line. subsp. 4200 9520 1 Fernates anagallis-aquatica Lina F. agrectic Line. Mazus japonicus Kuntze Sairia plebera R. Br. Rungia repens Necs R pecinaia Nees Rumex dentaties Linn Asphaleita tenuifolius Cas Lalicon temulentum Linn Phalaris minor Retz. Post annua Line Polypogon monspeliencis Desi

As he weather warms up in March seeds of several annual herbs and weeds, that lie dormant in soil throughout the rainy season and we need now germinate and they accessfully occupy the unused ground lawns



and the second s

. "

40)

[ 1.

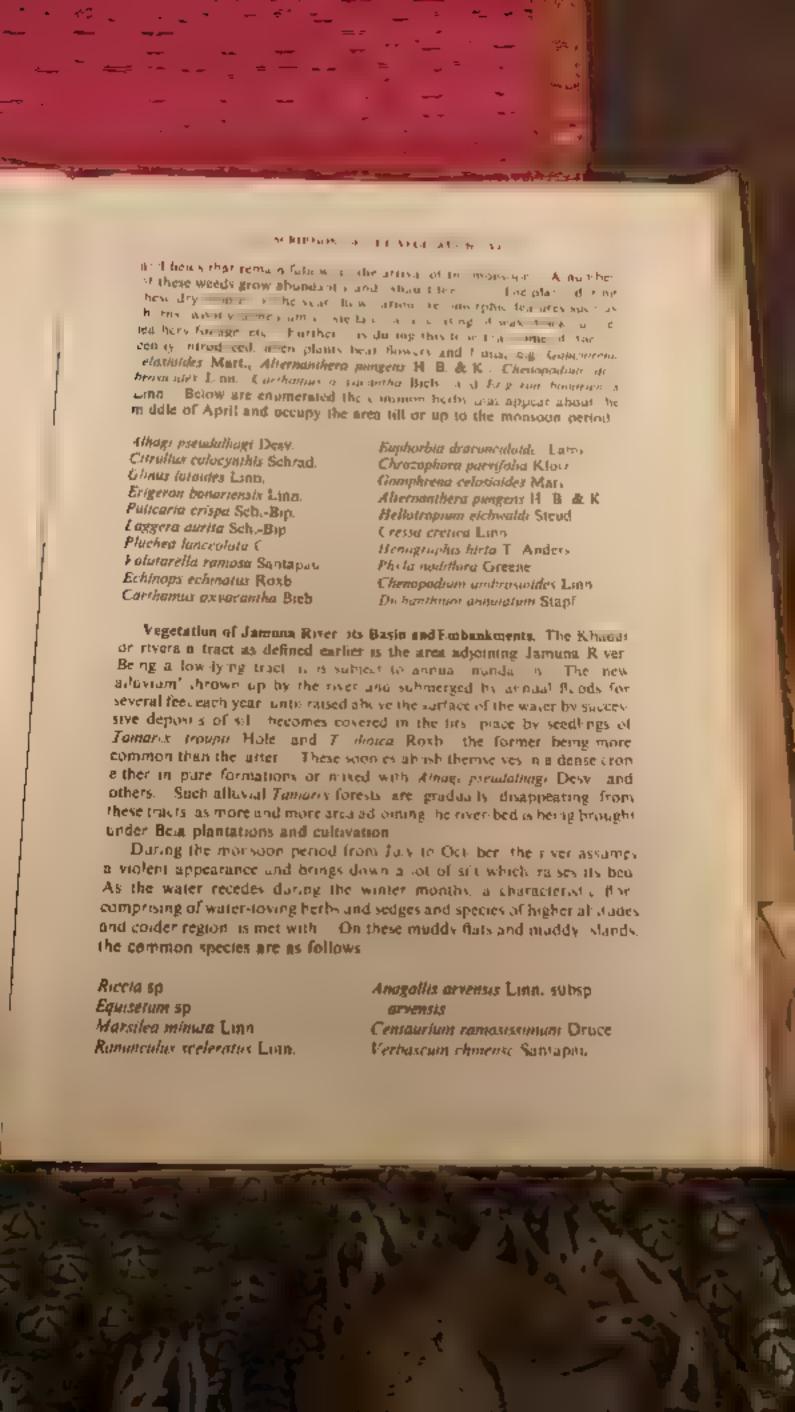
 $\sqrt{\epsilon} f f_{ij}$ 

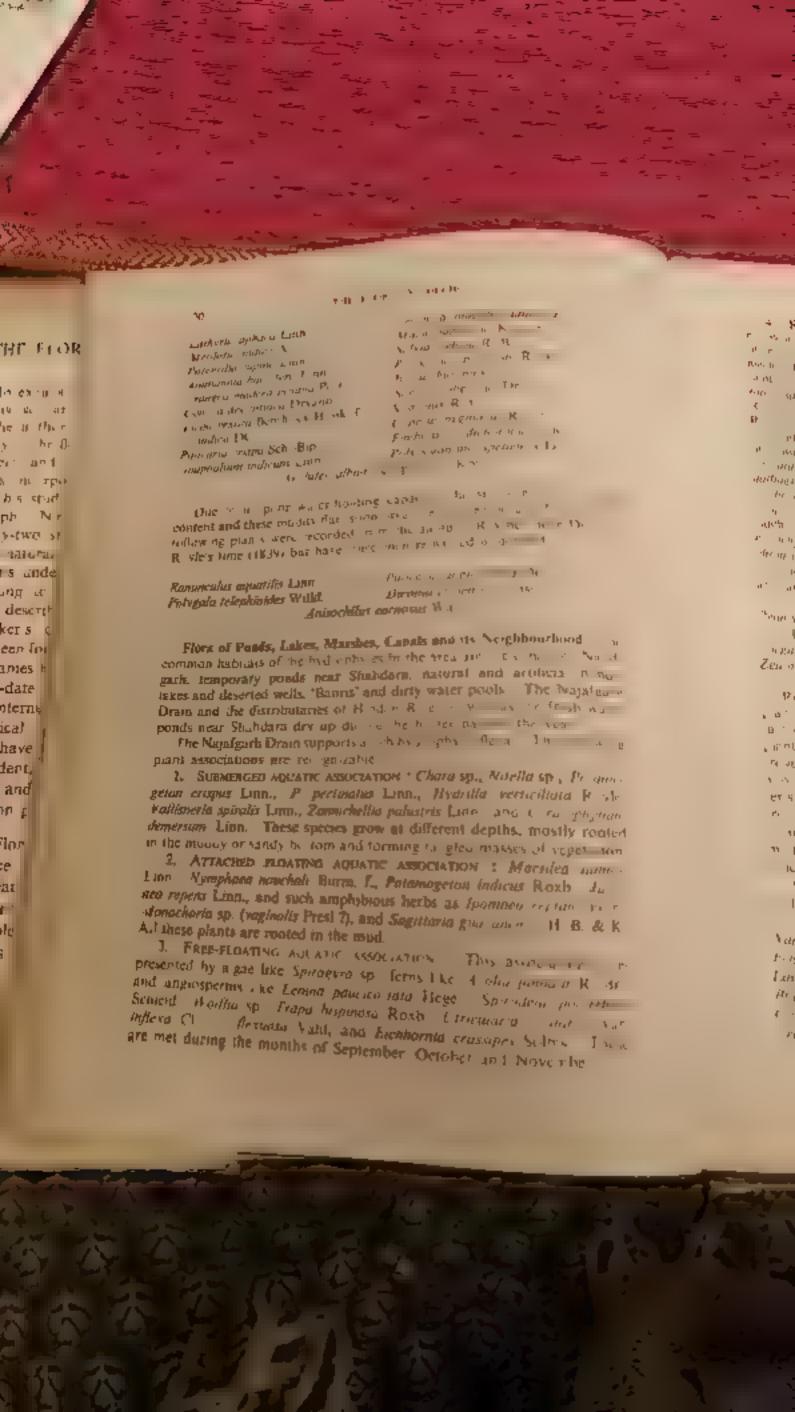
P(x)

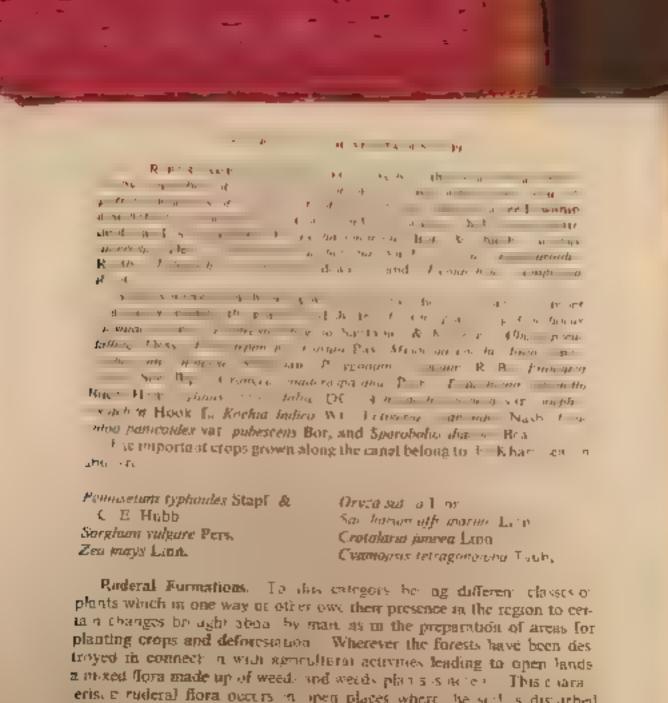
Pul Pul Pul Ed Ca

A co

E A







erist ruderal flora occurs in open places where he said is disturbed from time to time, in fallow fields, along trals and roals, waste places n and near settlements, old garden sites and cultivated lands. All such more made habit ats are very susceptible to invasion of a weed the Link or quickly occupies such areas unless they are properly cared in

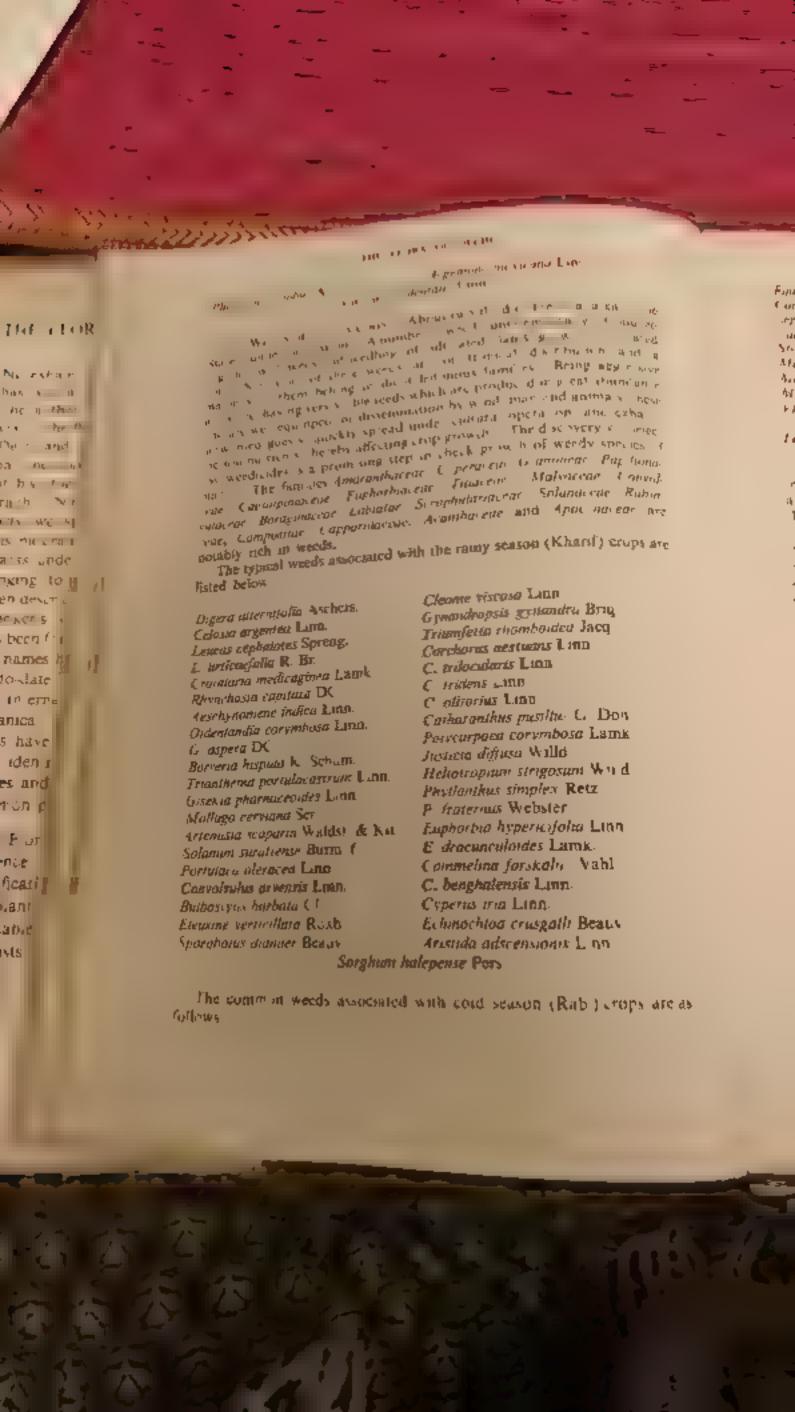
I ROADSIDE WEEDS! The following are the common species met

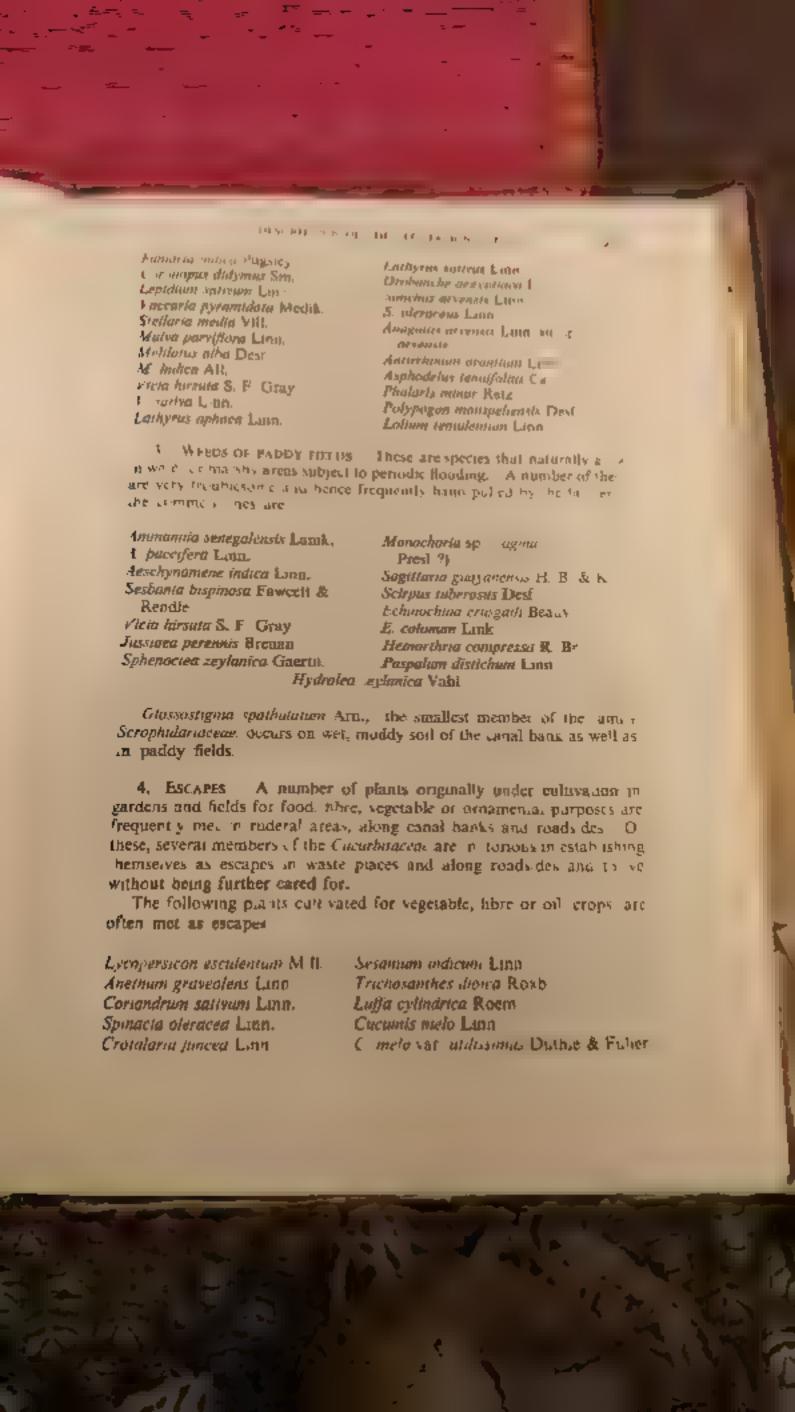
protectably along readules.

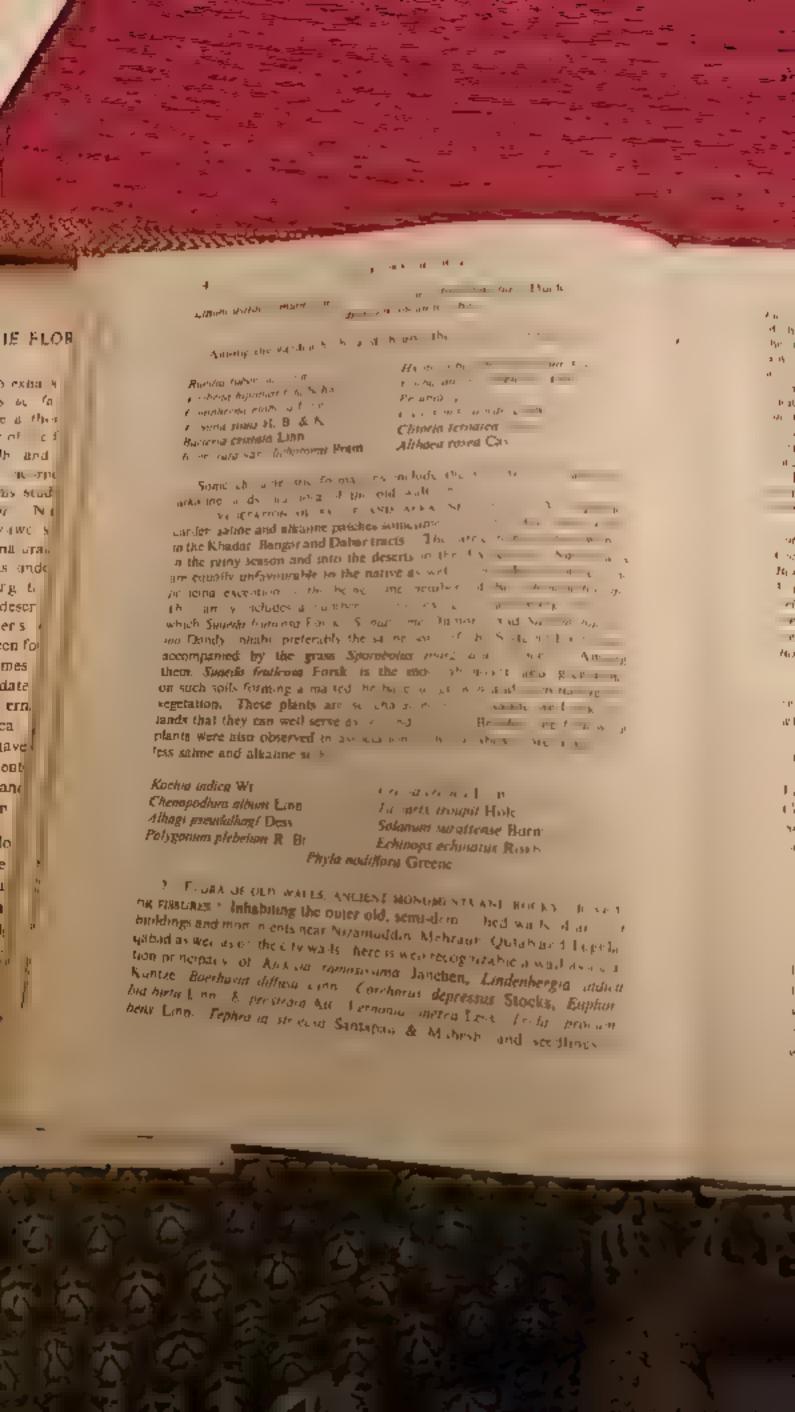
Yanthum strumarhim Linu Frigeron bonariensis Linn Laggera aurita Suh.-B.p. Bhunea lacera DC Carthamus oxvarantha Bieb Cresnaria medicagmen Larob

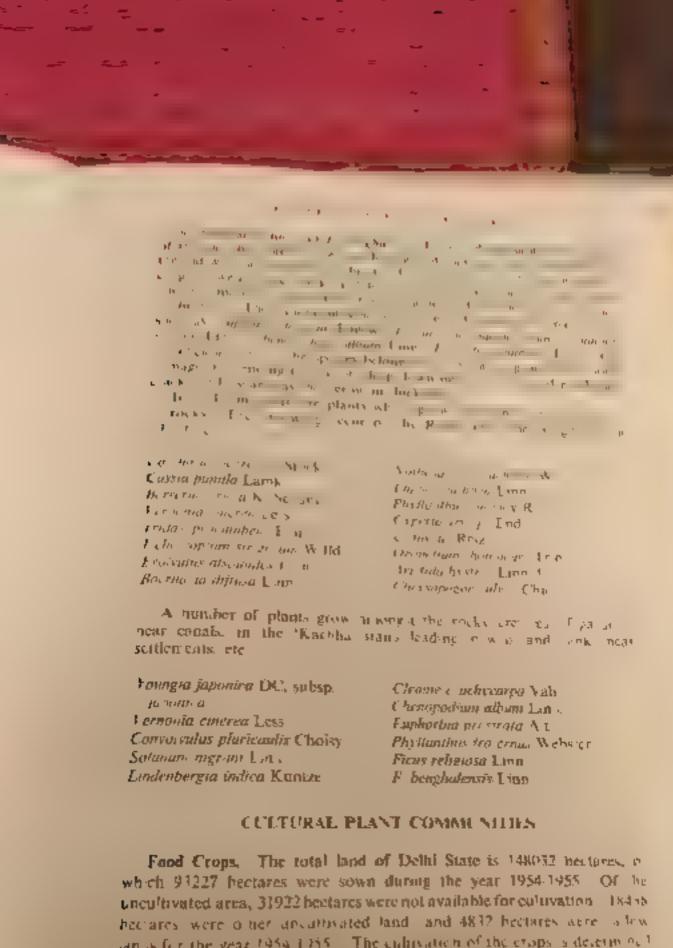
assia tara Libe Solanan sarattense Barm f Chenopodium ambrosundes Lum Cannabis sativa Linn Amaranthus spinosus Linn Euphorbia prostrata An-





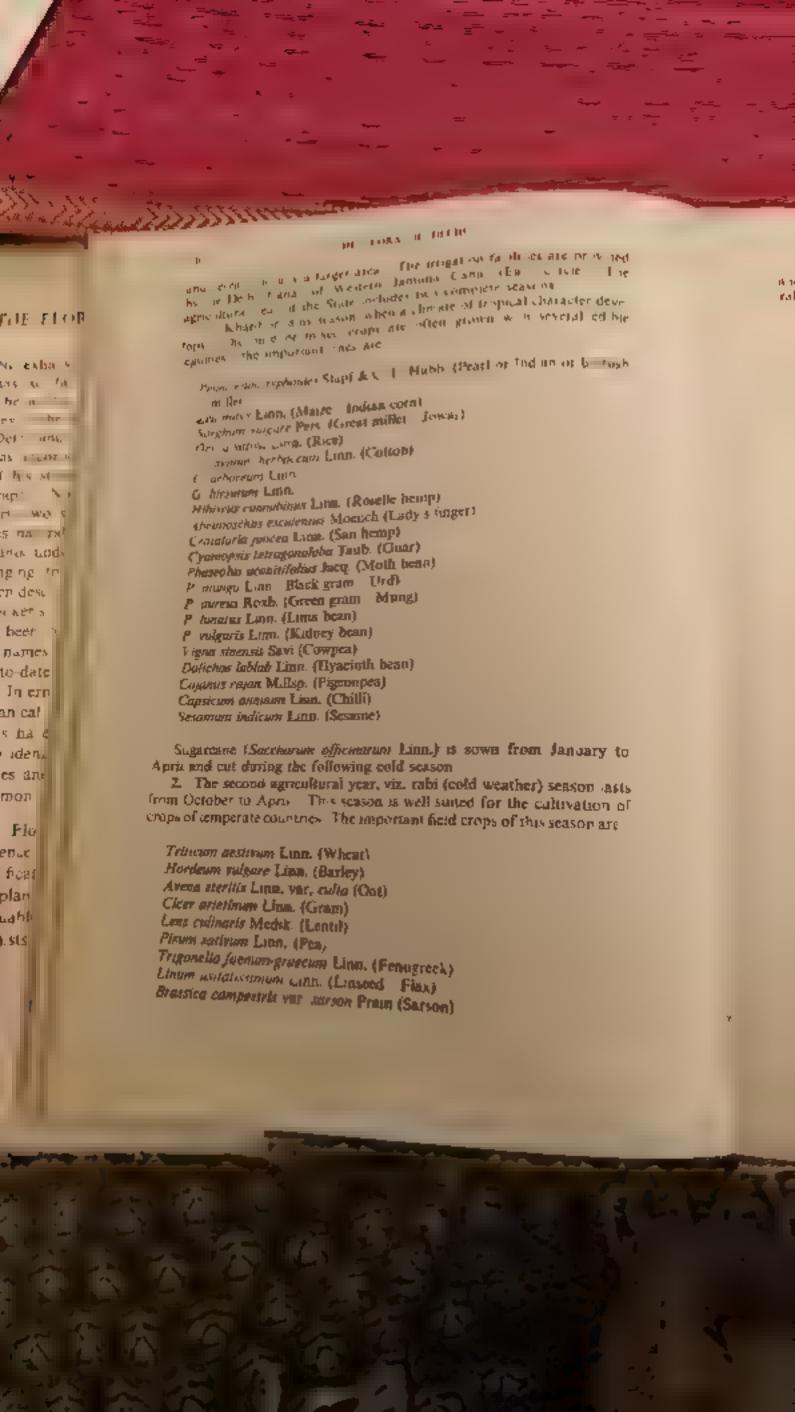


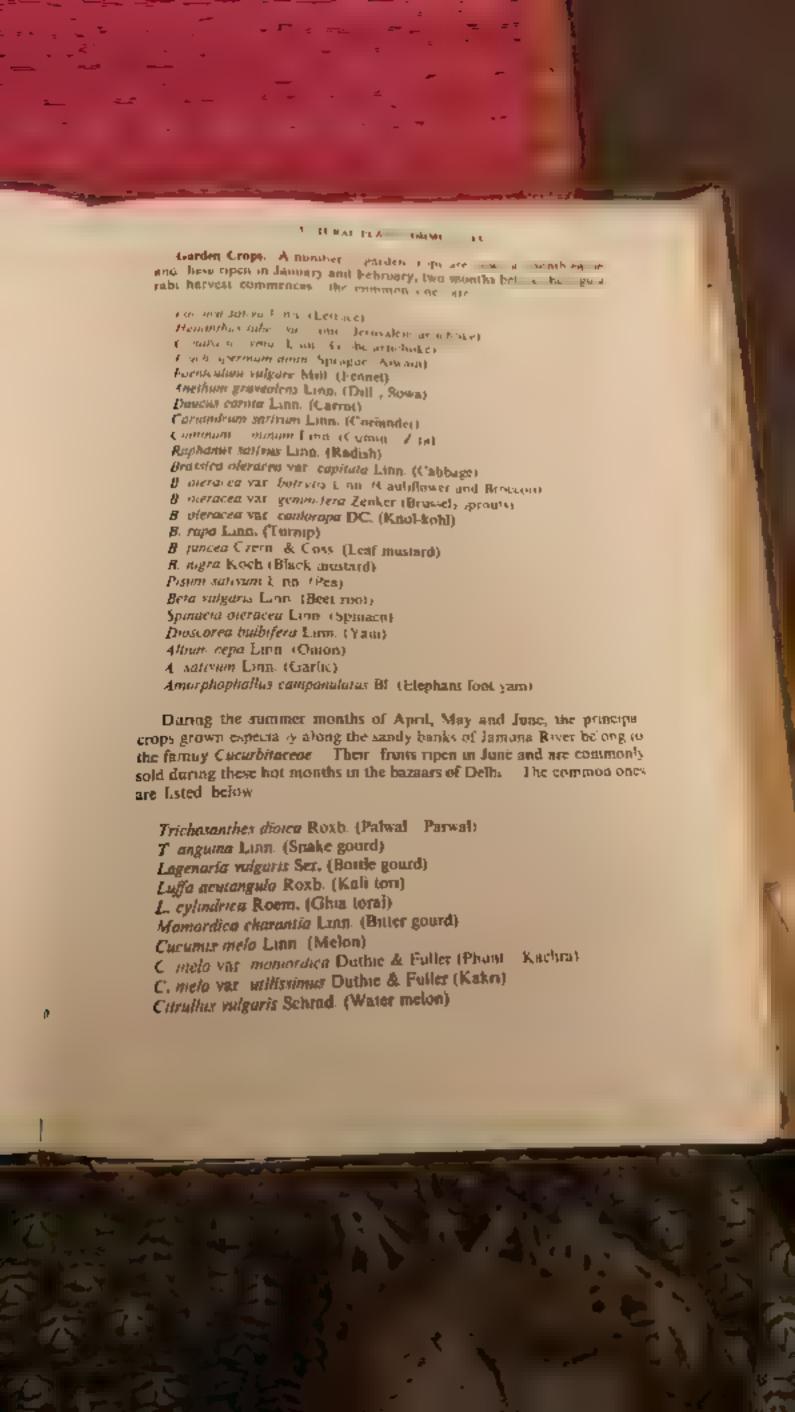


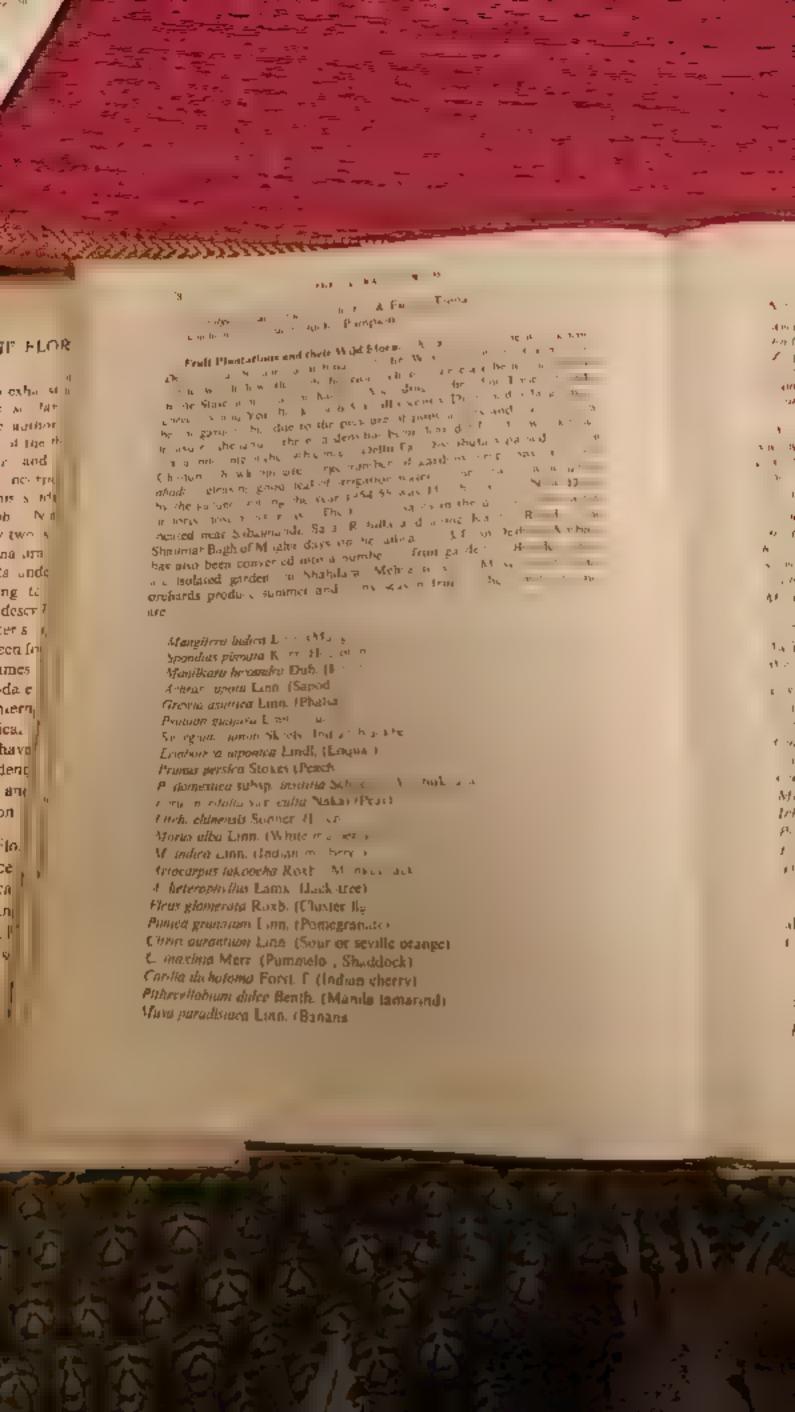


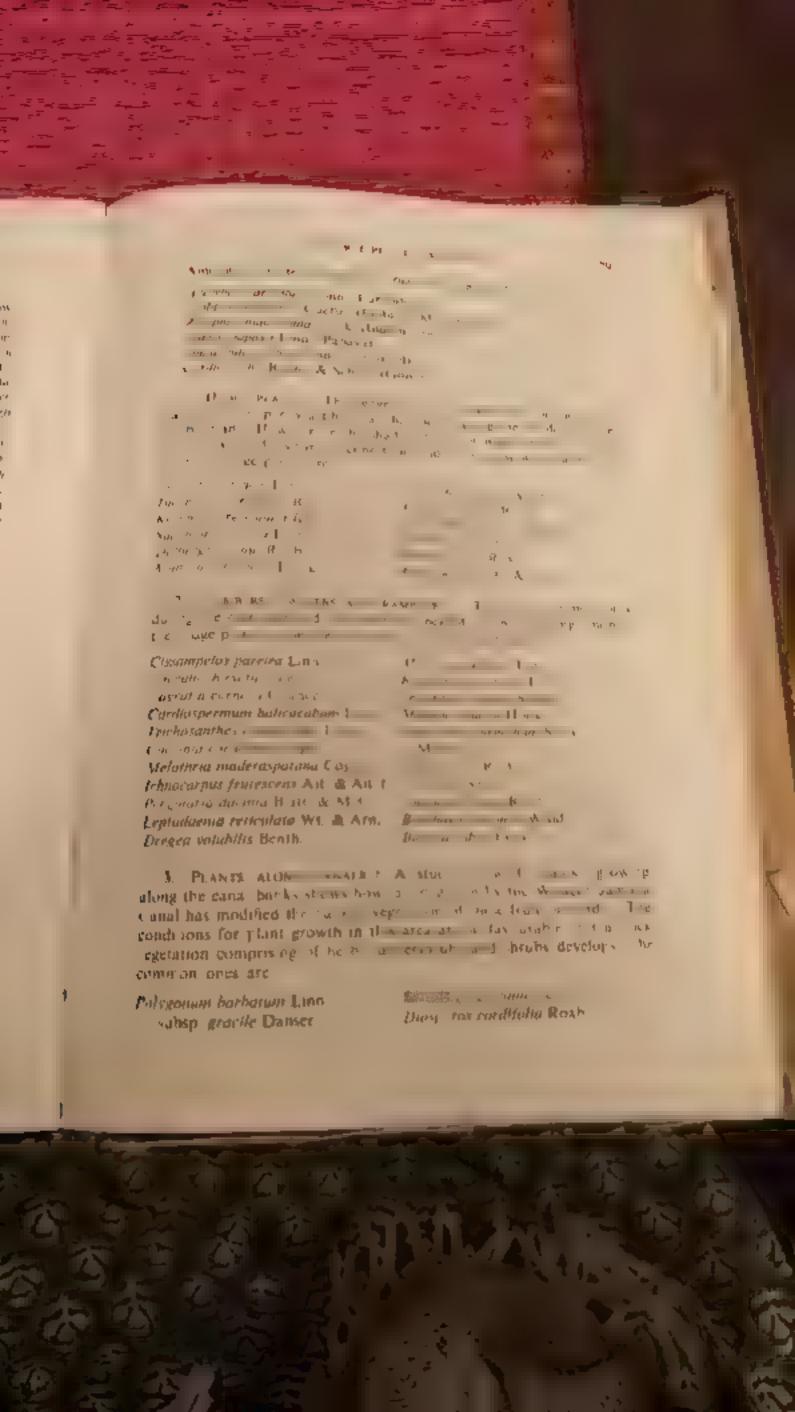
ian is for the year 1954 1955. The cultivation of the crops is determined by of piace, soil and water facilities. It reproductive that it is sellenwater are grown in a very small area, but div or rain fed copy the others

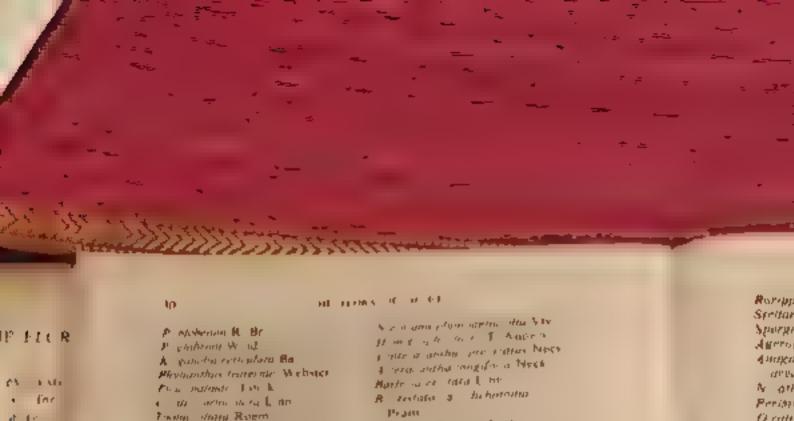












Ewon Jana Roem A sanglaria garacci un 1% Contoria granica Lich Ornanche stotonitera Wolf-Racinna imilica Hiero. Males rien rennandedelennen CHARCHE s rena labata Limb. Triumfetta chombordeo Jacq. Youngia Jupowca DC subsp.

Aperatum can, worder Limit.

Ac 4

Bed 1

The Print

111/2 4

2 ul3/

unde

g (1)

esce

T 5 1

n fo

008

ate

CI II

a.,

HYE

181

Dr.

Sections of section 1 ats American in order of K. 19182 Plantage thafor Lann Aerita funata Just Curry Irdia Nors Hemartheia compressa R. Br. Echinos bion crusquili Beaux & colomest Link Faspalum ustichim cann Parpolidium Havidian & Camos Errockloa grucera Hubb

Bidens liternata Mett & Shesil

4. The GROUND FLORA OF FRUIT ORCHARDS. The special circumstances of this habitat brought about as a result of artificial rengation are higher humiday and hum as one ent diffuse aunlight and a son moistened by water from irrigation channels. Quite a large number of weeds more or tess deficate and shade loving, are met with as herbaceous undergrowth n these gardens. It is a common feature to see that any one species completely dominates a particular area, forming a thick carpet of plants Apart from these many others have been and are being introduced from other countries and have become naturalized in the area. The common ramy acason herbs are

Triumfetto chombacdea Jacq. Urrna labata Lipp. Malvanirum coromandelianum Garcke Zurnia diphylla Pers. Desmodium gangesteum DC. Erigeron canadensis Line. E bonurjenski Lipn. Bidens hiteriata Merr & Sherff

Dipteracanthus prosteatus Necs Polygomau plebeium R. Be Phyllanthus froterous Wehkler Typhonium trilobatum Schott Cyperus kyllingia Endl Imperata estindrica Beaux Paspalidium flavidum A. Camus Echinochlog column Link Ophiotenus burenanne. Beaux Cynoghamam lanceolatum Forsk

The common coid season weeds are :

Согонорыя didymus Sta.

Oxalis martiana Zucc.

O rotte

Re the St s st **BORNI** ត្រង្គមាន Saba

grove

Kigel

Hapi

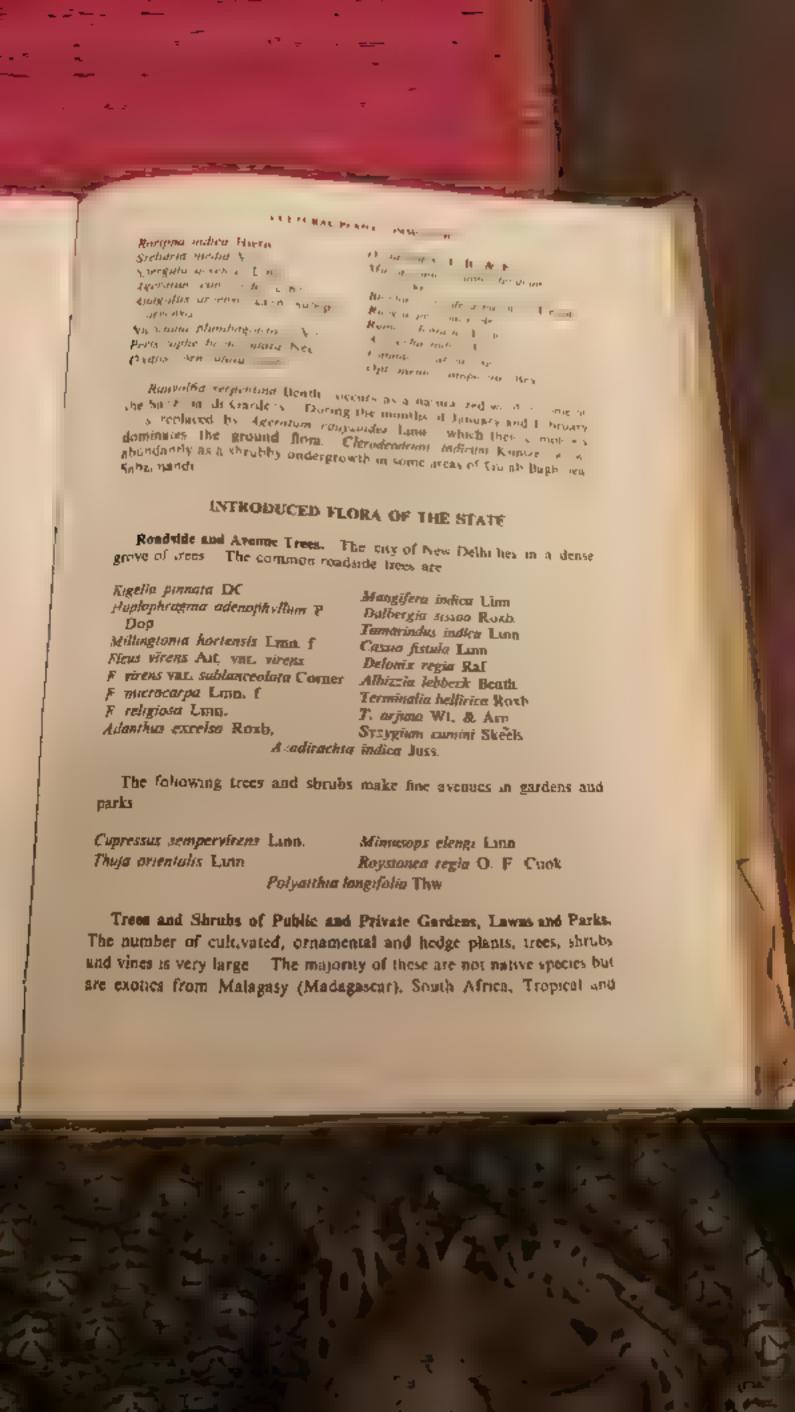
D

Milli F vi Fn Fr AJa:

> рдив Cup.

Thu

The and are.



And the second s

The construction are seen and brube plants to a good or a second party of

London common ser manera Moldenke Citharraylum spinusum I no Fuhler officials Covers Fernina Innonia Su ngie Ochna squarrosa Linn Meha azedarach Linn Chukrusia sabularis A Jos Schielcherg oleoso Oken Millettia ovalifolio Kurt Pongania pinaatu Piere. Maringa aleifera Lamk Baubinia variegata Linn 8 purpurea Linn Haematoxylan compechnimum 1 + n Cossia nadosa Buch -Ham C juvanica Linn C renigera Wall C stamea Lamk C fistula Linn C. getemisiotdes Gaud Delonix regul Raf

scario auriculiformiz A. Cunn.

Suzygium cumini Skeels

TE FLOR

RO fur

district

of the fil

Lic thou

s stud

two s.

ut tail

under

10

 $scr_i(')$ 

8 /

100

es /

te

cri/ii

1

T 92 TO ..... times the self B R inst tt Pundanus fascicularis | v v. E & France A.S. 1 chem you Lugar and Arman R Re P - ny managifan San de Sen & I : 1 Phot 20 6 - 16 141 S was a figurest P pro- n n N 1 11 1 00.090 [ 11 .... I(k) H = 0.01 + 0.01Myr my y y hi , 1 Jumes on The tree to Greener character a A Corn Bon ometer of the West Caranema equiventation ( , is Creas ecroluta Ibanic Pinus toyburghii Sarg

planted as bedges around gardens, parks ancient by Gogs C. or purely ornamental effect as screens for proact or 11 de ancient by Gogs C. or jects or buildings, as shelter for divestocks of as barriers 1000 use to passers and wild or domestic an max from fields and grops. The care many qualities that are desirable in plants used for bridging purpose

Phey 4. 1 1100  $g(t) \cdot t_i$ of no Carp - feet fli Acres ! 8 1981 B  $\Gamma[f_{f,r-1}]$ Buch H to B 40 March H has 11 50 11 1  $_{\alpha}h_{0}, \alpha$ 

> Ja re Ga p M y Post Then Just

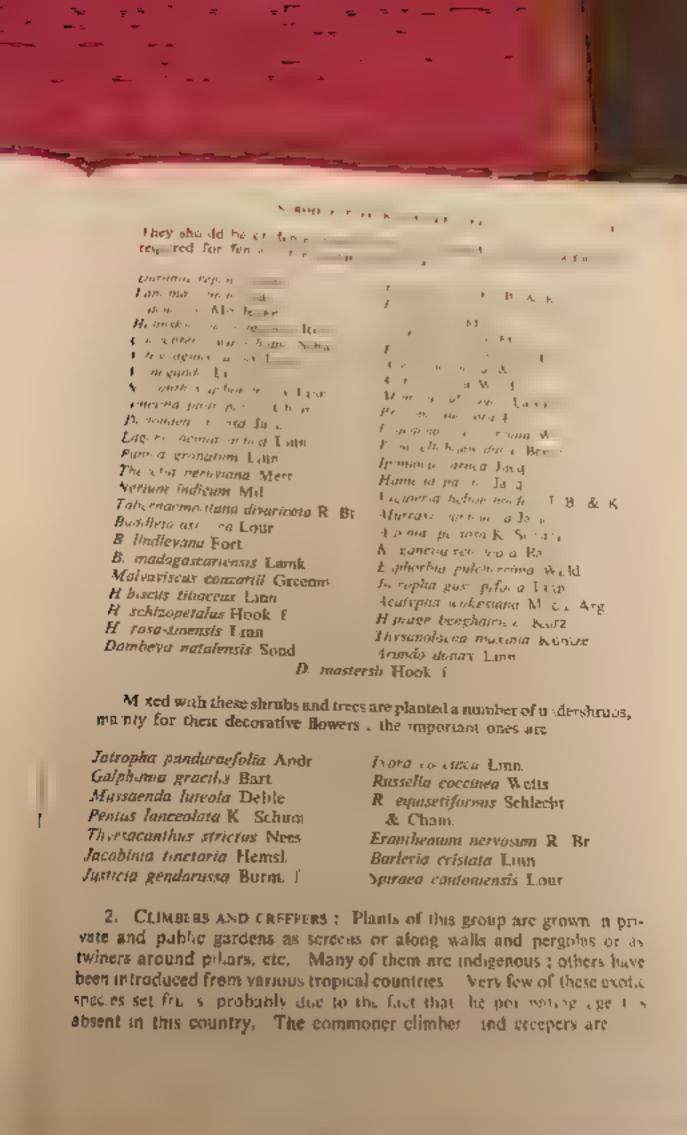
٩

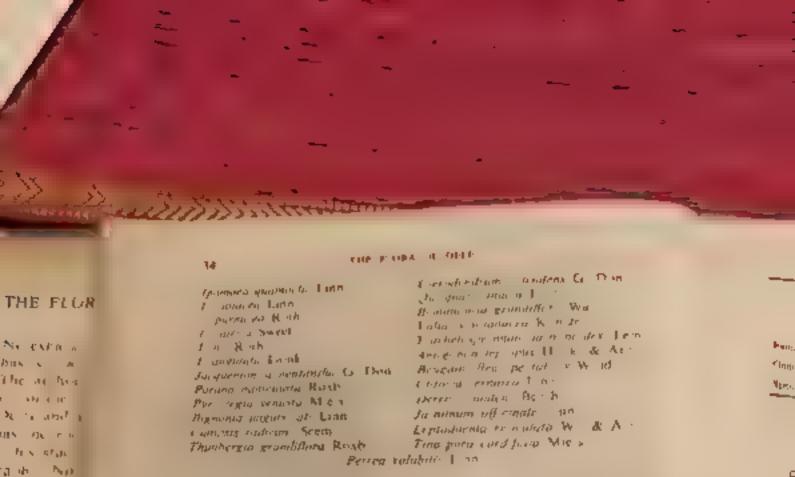
Table

heep thee thee above

Vale







Recently introduced Weeds. A study of the weed for a ros revealed that certain American weeds have recently been introduced into Delhi State and are rapidly becoming pateranced along roadsides. In sawns, fields, waste locations on the Ridge and as an undergrow him gardens. The common ones are

Nicotiana phanhagarifolia Viv Altermathera pungens H. B. & R. Gemphrena velamordes Mart. Chenopodium ambrasioides Linn. Euphorbia genevitata Orteg. E. prostrata A.c. Jatropha gossyp. Joha Linn.

My fall

S Tatura

ands unit

நாரை 11

in desert

beer fin

ONER'S

names.

o-date

Intern.

nical have

Jacat

5 and

16R

Fio, ice

ca

aΩ

ы

Craton honplandament Bot.
Salaman torcum Sw
Opantia diffenii How
Ovalis lanfoha H B & K
O martiana Zucc
Erigeron honamensis I a:
Eichhorma crossipes Somes

Some of these American weeds have well established in Delhi State. The conditions are so favourable that these are more vigourous in their new home than in the native lands. Merrill (1946) helieves that as least to some cases this is because in their in roduction they were anaccompanied by specific plant diseases and insect nests which checked their spread in the original bornes.

## STATISTICAL SYNOPSIS OF THE INDIGENOUS FLORA

Except for Coperaceue and Grammene, the Vonoconvledones are ery poorly represented Of the 143 species of Monoconvledones (Table I), 18 species belong to the two families mentioned above, while the retaining 25 species belong to 14 different families. The rat o of species belonging to Monocots and Dicots is 1:27, of genera I 32 and I families I 4.7. It is interesting to note the proportion of mera to species. In the whole of India it is 1:7, in the Gangetic

	Funds a Statistical Remopers of the Friend					
	a Printer		\$ a		ital	
Pamilies.	1 h	H k	* p.	N		
Chipera	9.0	161	41.41		4.	
Specim	10	100	p 3	1	,	

Table 3. Ten thenimous Function to Dobb have, Compatie Plate Region, the parties and testing

Acth State	Maria of	Katrolana Guise & Haste & 201	Marchage new
Chaminese	Оганивеле	Grandpage	Ostribus state
Leghathunomae	Legenstone	• рипипочае	Leganharan
Contapositing	Строталене	Composite	Ob significate
Cypetaceae	Computitae	Суропасная	Rutinuene
<b>≜</b> cartbace <sub>de</sub>	Scroptisheri sere	Covalentaine	Suptorbuses
Euphorbia eac	Mulvariage	Atternational	Alamhamae
Convolvutacess	Acort states	Hararinaceae	
Malvacone	Euphorbiaceur		Compositive
Ameran disease	Селуовущаем	Cocarbitamae	Cyperacene
Serophylariacese		Buphortygocac	Fabrurge
Own of feet Will STATE CO.	Labiataç	Mathiocae	Bauraceae

Table 3—Areas of Origin of the Plants of Delhi Since

Region	Nomber of spp.	रेक शतस <u>्</u> थ			
N African-Indian Desert Belt	22	4 60			
Toopical Africa	37	774			
Propical Africa and N. Africon-Indian Desert Belt	23	41.87			
Africa or West Asia	17	3 36			
Mediterranean Rogion	10-	2.09			
Indian Region	8.1	\$6.95			
Indo-Malayan Region and East Assa	37	6.98			
Indo-Mataya and Africa	33	6.90			
Temperate Region	8	1.67			
Yew World	14	2.93			
replication cosmopolities	200	41.81			



THE FLOR

No ex 1 s i s is the following Re a h L F ten und is the other h & Stage tpr. Ly wo y mar ra ns and Log e descr Ker's ecq or алиея -date ntern ica)

have

Jent

an

n

10

e

1.1 whilet in Dethe State show to this or question of the other of the countries of principle and factories to the area of the best of the countries to the principle should be a feet that when the area of the countries the principle also the princi

in the experience of ghis site should relations of the Form of Deth. State, species genus then with the monghither than given a complete that of the left destroy the sum of the Resident State Courses of Press Report Resident and and India as

a white gives processed both the good of the deto his a trusten a the common border of Rays, and Punnish Plains and the deter pasts of Casas Pegalesh. A one would expect the floral of Delhi character and by the same on the Ridge thows common features with the think of these adminished matter. Table 2 shows like the miles Countriese a expenses one is the rate and the measure in this first four positions in the Firea of Della State Campe to Plain Region and Rapputana. Among the offerent types of vegrou ton found in India the dry troping scrub fores are suand in Rings and and the Puniah Plans where raintal does not exceed 1 k cm. The mess charac erist c trees are Prosepia integera Linn and sales species e Cupput's Salvadora and Tamaras. The indigenous seperation of the a open part of the Gangetic Plain is a dev forest. The purpose on cross to this region. is characterized by Anogersko review a basen. Americ senega. Want Prosopis spicigera Linn. Basicona ser ata Resh. B. arandi ndron mukul Hoese Moringa sp and Rhus sp. Normalina spp a c. his interest of the so-caued Esar or Refelands which are impregnated with a kin ics and occupy a considerable area of this region (Hooker, 1907). The extensive tracts of low and scattered bush rangle known locally as Raulis and found in some parts of Punjab plains, consist chiefly of Prosopis spiciaera Lana, Salvadora pleotdes Decne., Capparls decidua Edgew., Acquia arabica Willd., A. leucophioea Willd., Zizvphus minimularia W. & Arm, and Coeculus pendulus Diels

Among the types mentioned above the Ridge vegetation is represented by Prosopia spaigera Linn. Saisadina persua cinn. S. otrindes Deine, Capparis del atua Edgew C seriana Lina A u la rescaptiona Wester A senegal Will A arabica W. d. A moderna Wal. Anogensus perdua Edgew Balannes rashurghi Planch Bulen municipierno Tauh Carrier quinarum cann. Zerophus manimusorio Wil. & Arn. and scattered mitterduals of Rhus messagenses viewed etc. The occurrence of a mixture of these character stic plants shows that the Ridge vegetation is composed if the dural elements of three abutting regions. Rajpulana, he Punjab Plans and the diver parts of Uttar Prudesh

## NOTES ON THE FLORA

Out of 531 indigenous and naturalized species, 478 species have

Br di je a raj figure and 1 years APPLICA · Planning mga White 14 n hu 100-141-003 Specifical Control h h St. D. ATL . 0.10 ho j exertica CHA MT Time Ba m L A 46 to al  $C_{10}$   $C_{2}$ CHETC WORK y tut to fig gene 100 ( gray r .g कर जोहे

N

. |

Majore

40.57

(W)

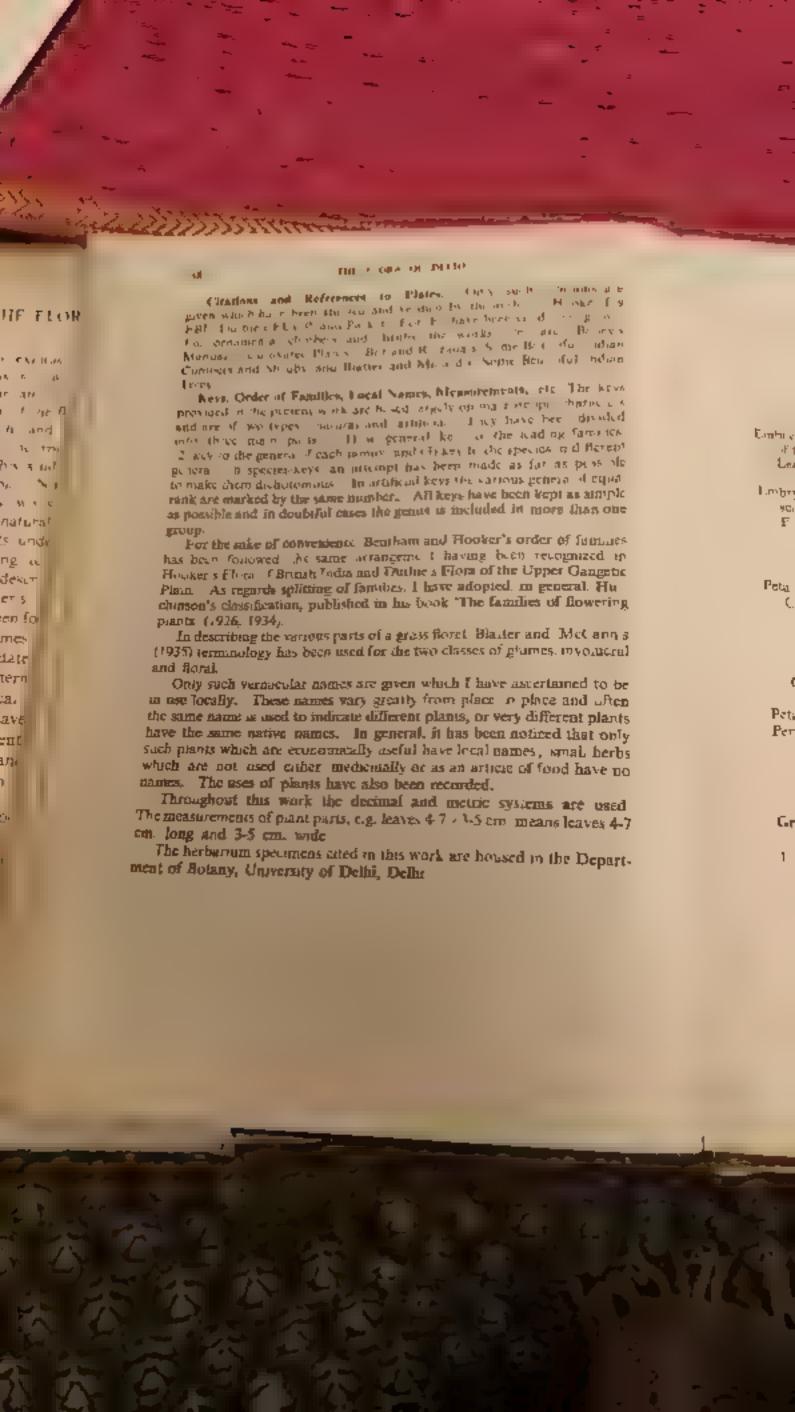


heen least write the second of the control of the state of the second of

Bis er and Halberg 1,920 to longuished thee well me ked chicalors in he flere of the Rasputana Desert. a western, an eastern a La water general element (including Indian element). Sumlar elements have been noted in the flore of this area; one coming from the Malayan Rey of . he east, another from North Africa through Asia Minor and a third widespread element of the tropics and of purely Indian species. There a c no enden is planty in De hi Stite. Leaving aude the rene is giernen. the phytogeographical status of the firm shows that the weavers element consists of 109 species and the estimat element or A species. The eastern element in the area is about 1/3 of the western war and the flora of Rajputana Desert. Thus, the Indo-Mulavan clem of g m chilless represented a Western Rappotuna Drude (qui ed er Batter and Hatberg (970) ofew the line of femals on he weer the Indo-Malayan flora and hat I the Perso Ambrao Reg. in from he Gulf of Cambay minchwards along the Arava is 11 s seems to be correct.

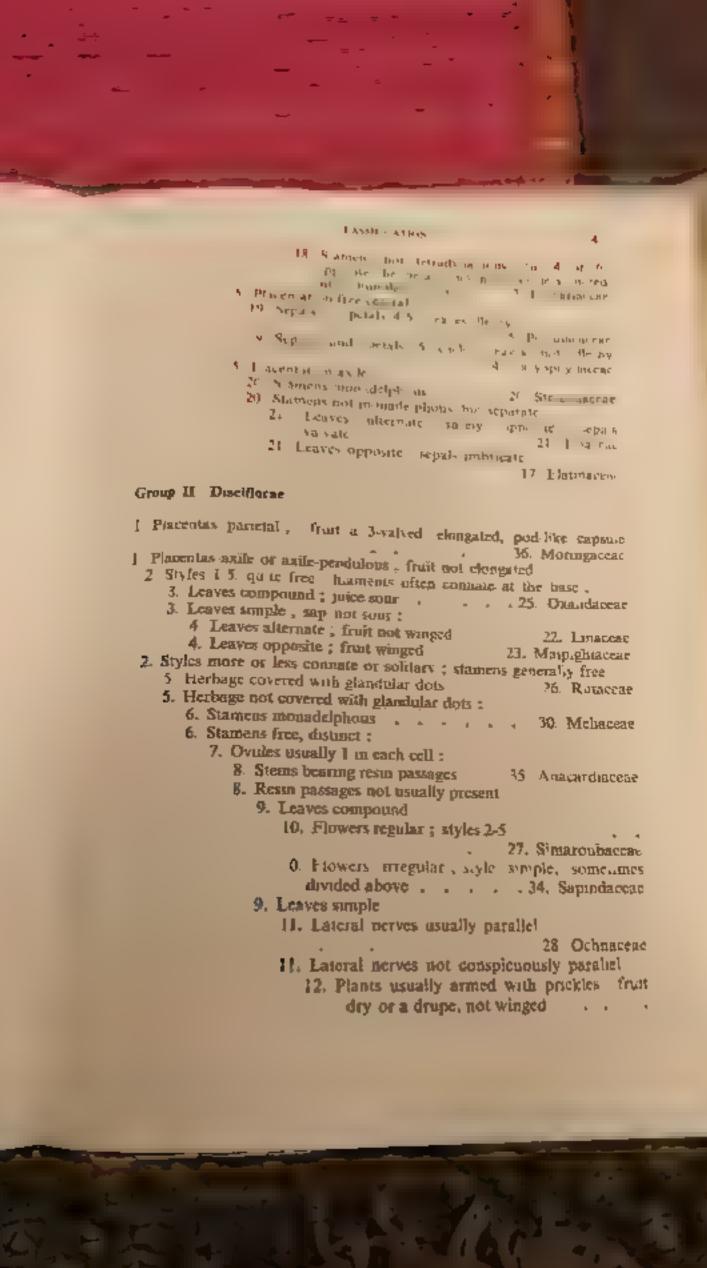
Nomenclature. The same he plant listed in the present name work have been corrected as far as possible, but for those cases, that come under the previsions of Aricle 43 of the present literax ions Code d Bo annual Numericature 1981) it is too difficult for the horard's in find a to find out the actual or correct authors of the var has names. For the general Desmi diam and distributions Subject or has shown the many of the plants under these wo ginera in ladia are wrongly a larged of the Candobe, they being wrongly identified their he monographs on these generalare published, the avail numerications found in an heart with the on Indian botany has been for seed. When a name other than the usual one has been ado, ed, the basionim in which the newer name is based, has also been given, showing the date of the latter, so that the names adopted are in conform to with the Rule of Priority. As a tesall many of the names given by J. D. Hooker, Durhie and Parket in their floras have been rejeated to the synonymy and some new combinations have been adopted





## are $f^{\alpha,\alpha}\mu$ Blat ty w 福井 řι 24% N/A Classification cd Limber's with 2 constitute travely one by reductions. Various the K, H٠ force where away dy agranged in a vingle congruence many over a congruence Louves usuably remodately veined. Thewe stape at \$5 + 4 me in e ţŕ Class I DECOTY FOR SILS En bryo with one cutyledon. Vascular bundles of the wear almoly Ľ, sea gred cambion usuady absent. Leaves usually parallel veined Ę Рюмет турка у 3 листом» Class II MONOCOTYLEDONES CLASS I DICOTYLEDONES Potals free; flowers dichlamydeous Subclass I Potypetalac Calyx of distinct sepals, ovary superior or immersed in the disk Fores amail or clongated, not expanded Group I Thalamaflorae Torus thickened or expanded into a fleshy disk 1 2 Group II Desafforat Calyx of united sepails. Overy usually included in cases tube or inferior Group III Calyciflorae Petals stoited Subclass II Gamopeta.ne Perianth generally calyeine, single or absent Subclass III Monochiamydeae Subclass I Polypetalae Group I Thalamiflorae Stamens numerous (15 or more) 2. Gynoccium apocarpous carpels usually many but sometimes reduced to one: 3. Habit terrestrial: 4. Plants herbaceous ... . . . 1 Ranunculaceae Plants woody : 5 Stipules convolute, sepals and petals imbricate. I that dry Magnoliacene 5. Stipules absent, sepals and petals valvate, fruit fleshy . . . . . . 3. Аппопасево

THE PERSON OF THE RE 40 A Ny ophia alicae 2 to there make the course and media court of the hy free might for the first of the process of 3 Pfabr baue'n THE FLUR 7 Leymonton destication and appropriate of appartude car VA NORTH ds so for 2. C. moce on not envated. he is the 8. Separa 2. Tennes supenda openinge 3. 20105 6. Pay in one had 8 Sept to 4.5 front indefinition. However, as ally dioces has h he god 12. Развилитическо A PARTIE Tenves Rechy 6 Placeduction free-central or basist-central. Bry St. Se 14 Part peacette ph N 6. Placentation thought usale, sometimes basar 9. Sumens monadelphoto-TA THE K 10. Ambers anaocular пасога It Carpets 5 is many often splitting away from 1 s unde he central airs or becoming free in fruit proup rng rough , mostly fierbs or shrubs 18 Магунссие OSS. TO co Carpets 2.5 not or very rarely splitting nway ker s from the central axis in front ; pollen smooth cen fee tropical leges . . . anne. 19. Bombacaccae Anthers biloctrker 20. Stereniaceae STRD 9 Stamess distance, wethers belocular - 21. Tiliaceae CIN Stamms few, never more than 10. ca. Gyanecoun apocarposs , climinag strubs 4. Меньрегвасевс 12. Crynoecsum syncarpous, berbs, shrubs or trues : 13.06 3. Sepais 5, the two meet colarged and often petalout \* + + enf 13. Polygalacene  $BD_{ij}$ 13. Sepula 2-5, not colarged . а 14. Leaves scale-like , seeds winged 16. Іншапсисене 14. Leaves well developed Phopptation perieral. 16. Ovary open at top before seeds are ripe 2 . . . . . . . . . 10. Reseduceae 16. Ovary closed at top . 17 Connective of the anthers produced above the ecils flowers regomorphic, the lower petal often grabous or succeste at the base 11 Violaceae 17 Connect ve of the authors not produced, flowers actino- or zygomorphic : 18. Stamens 6, tetradynamous; sepais 4 . . . . . . . . 8. Cruciferae

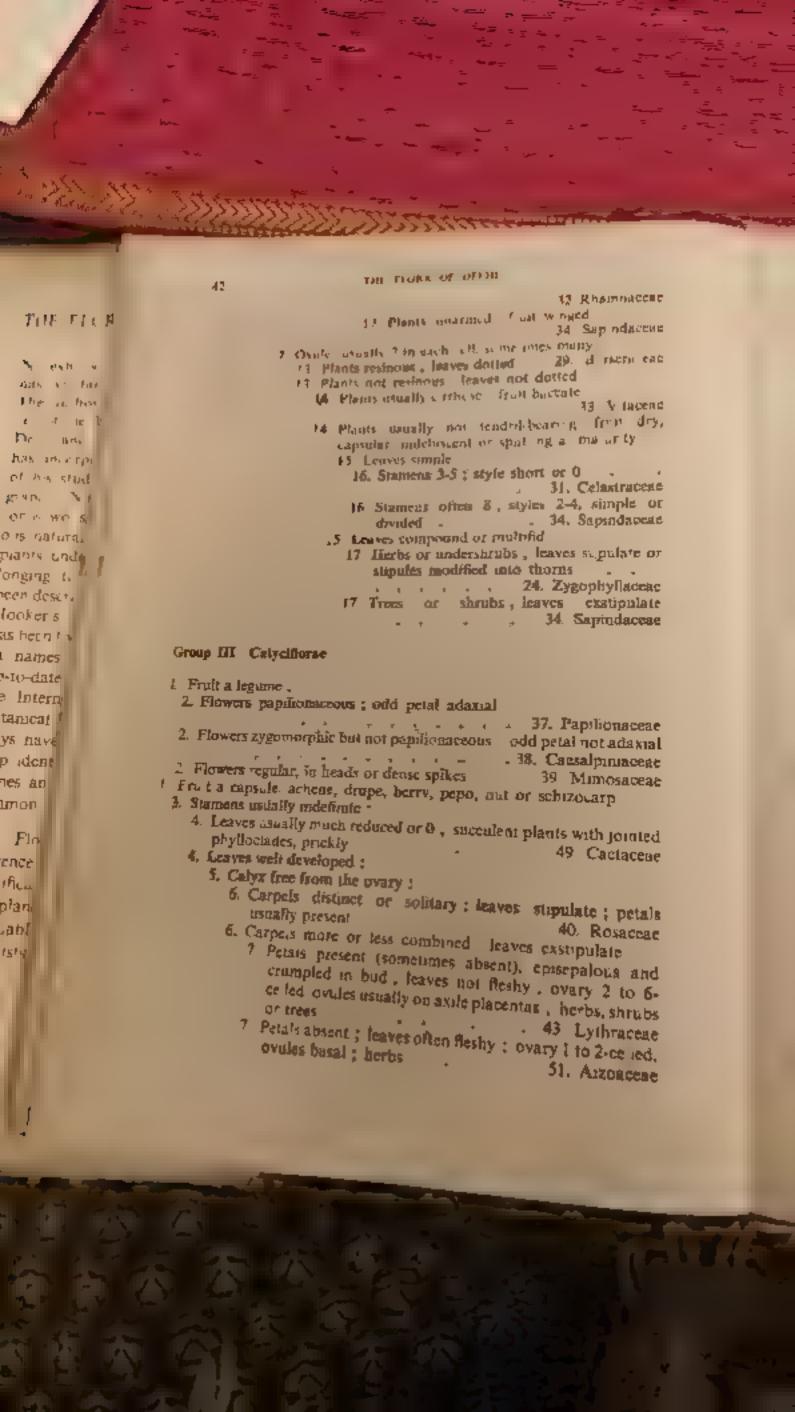


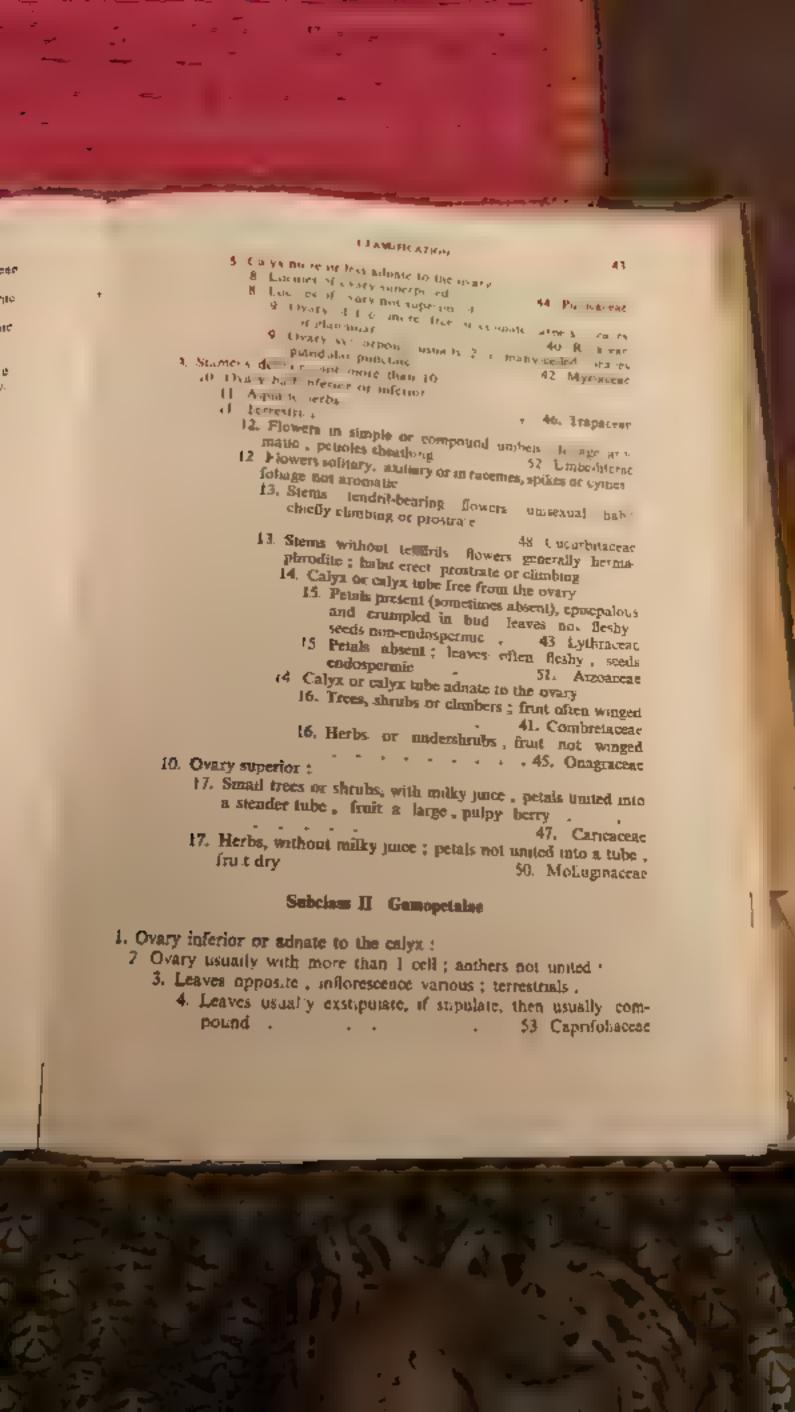
384

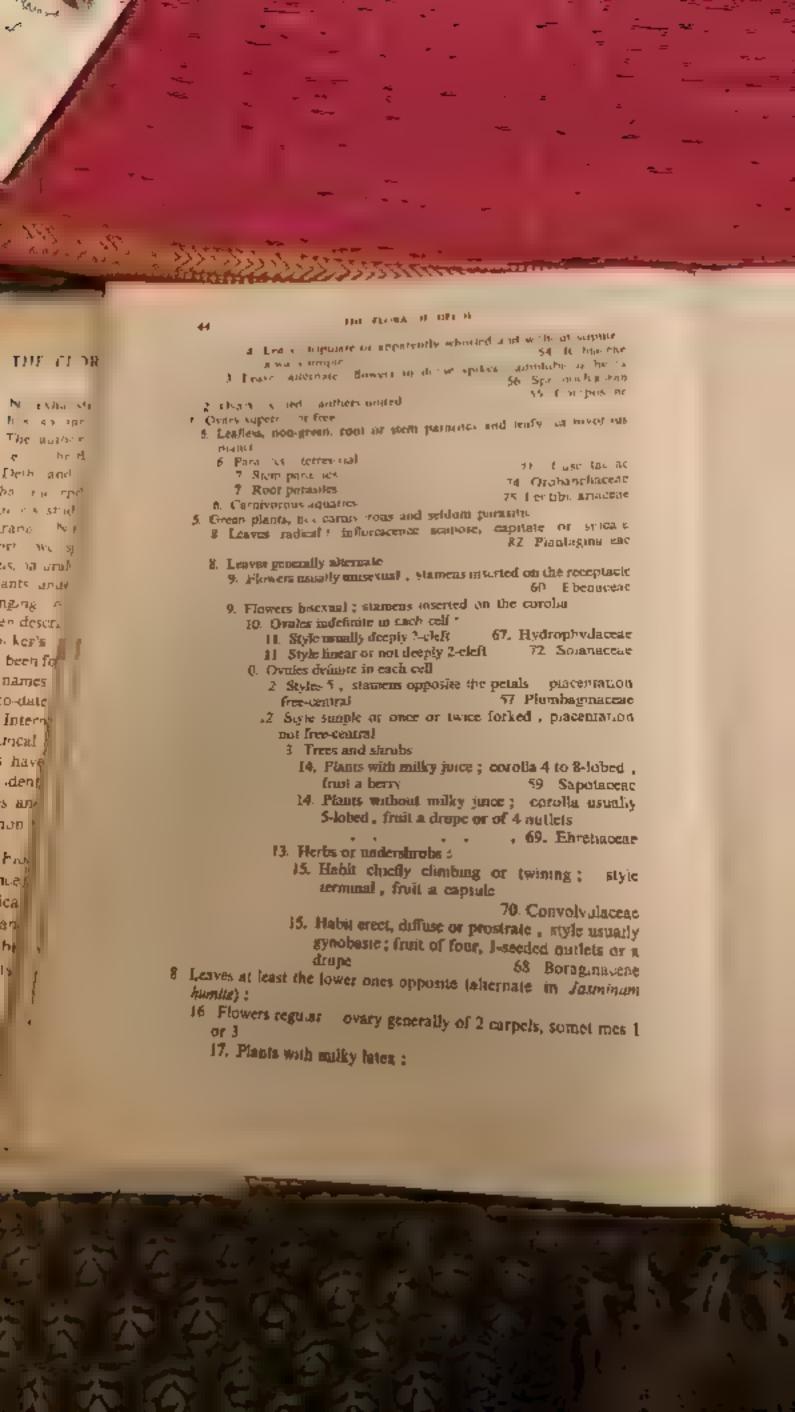
ıl e

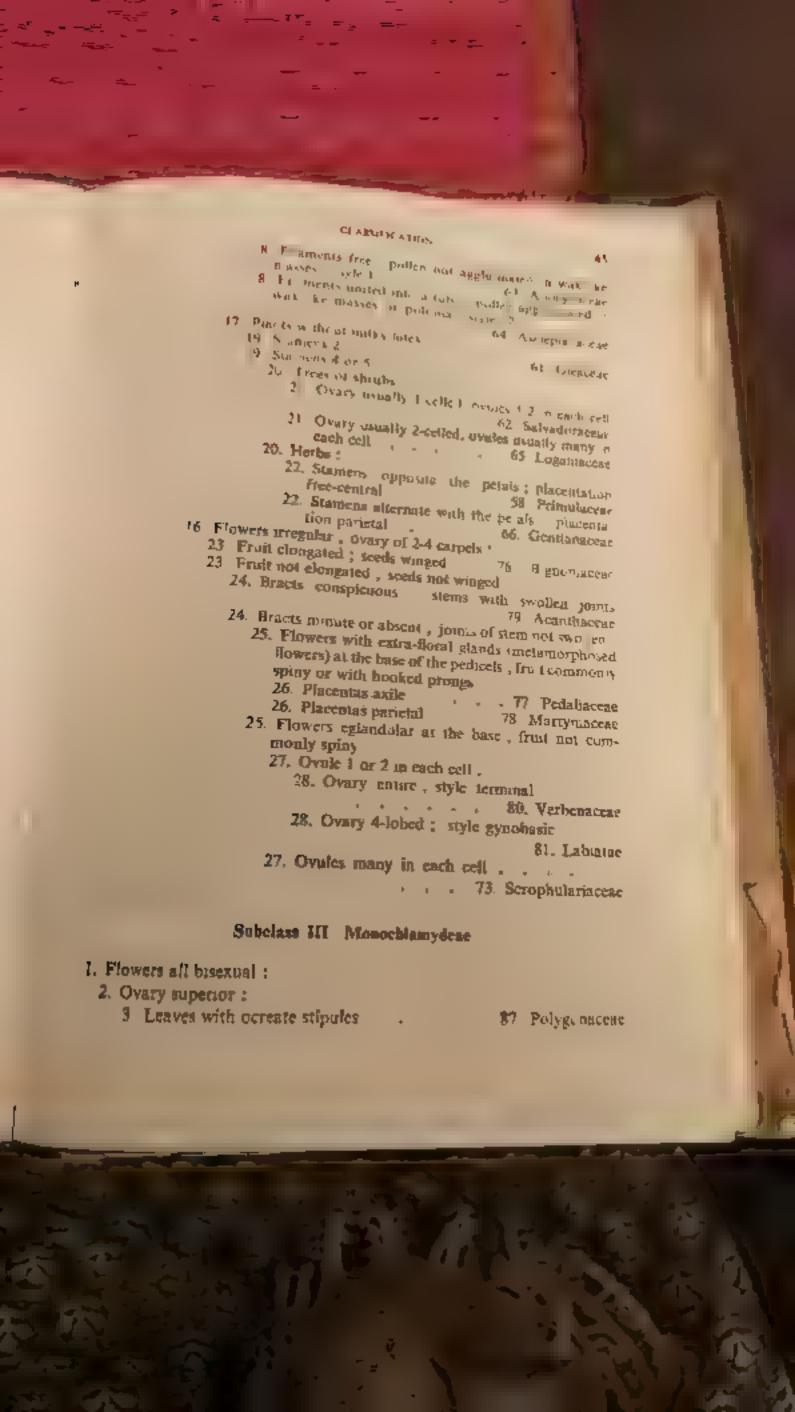
ķ

ť,

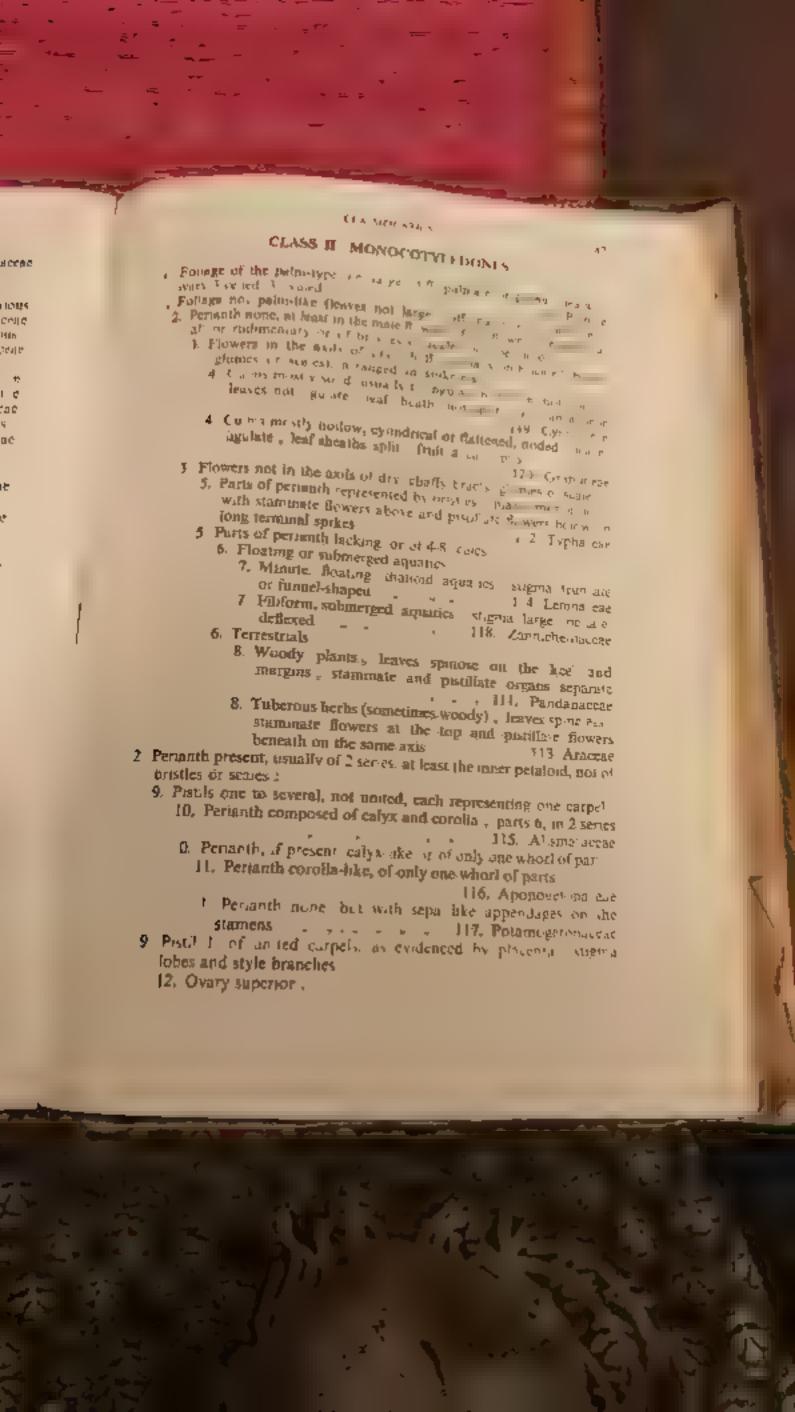


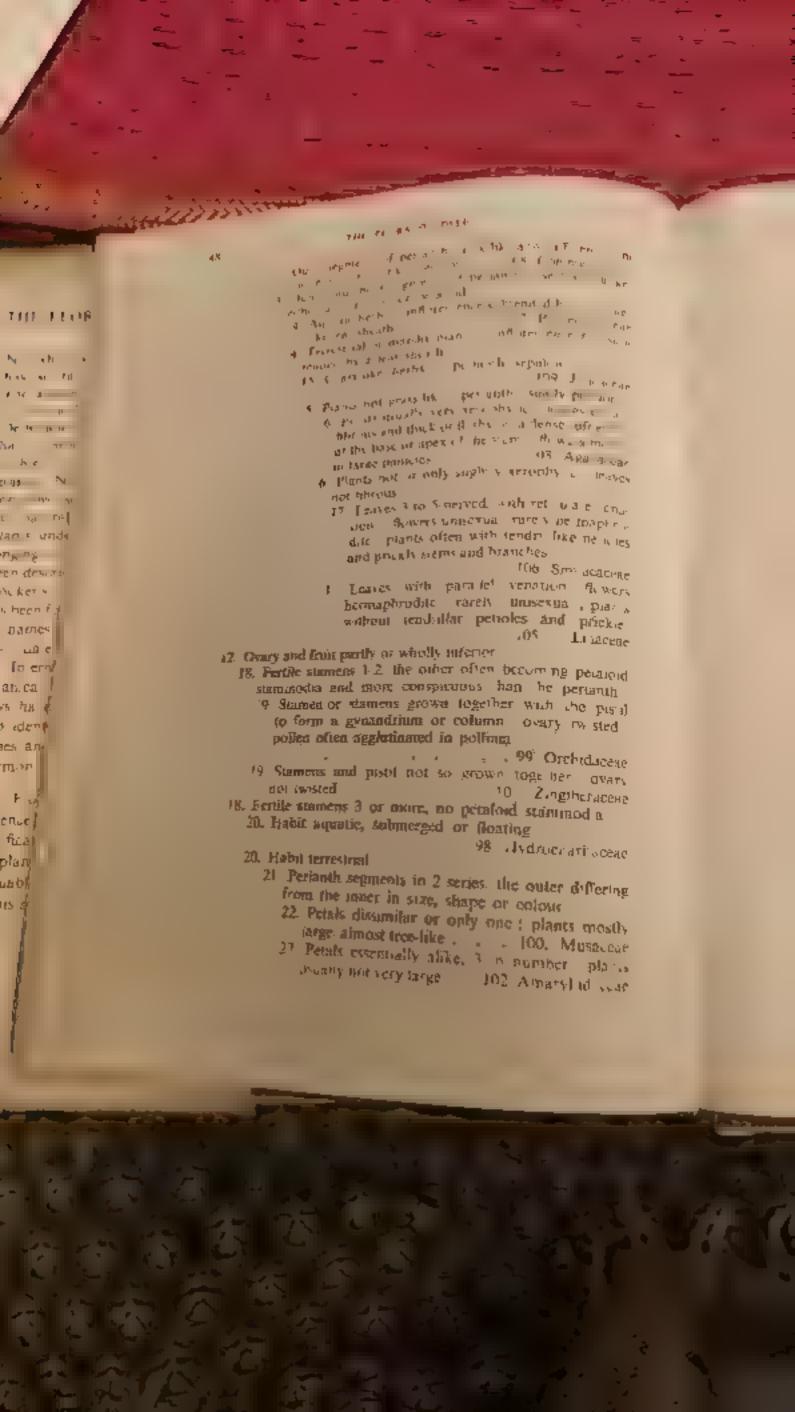


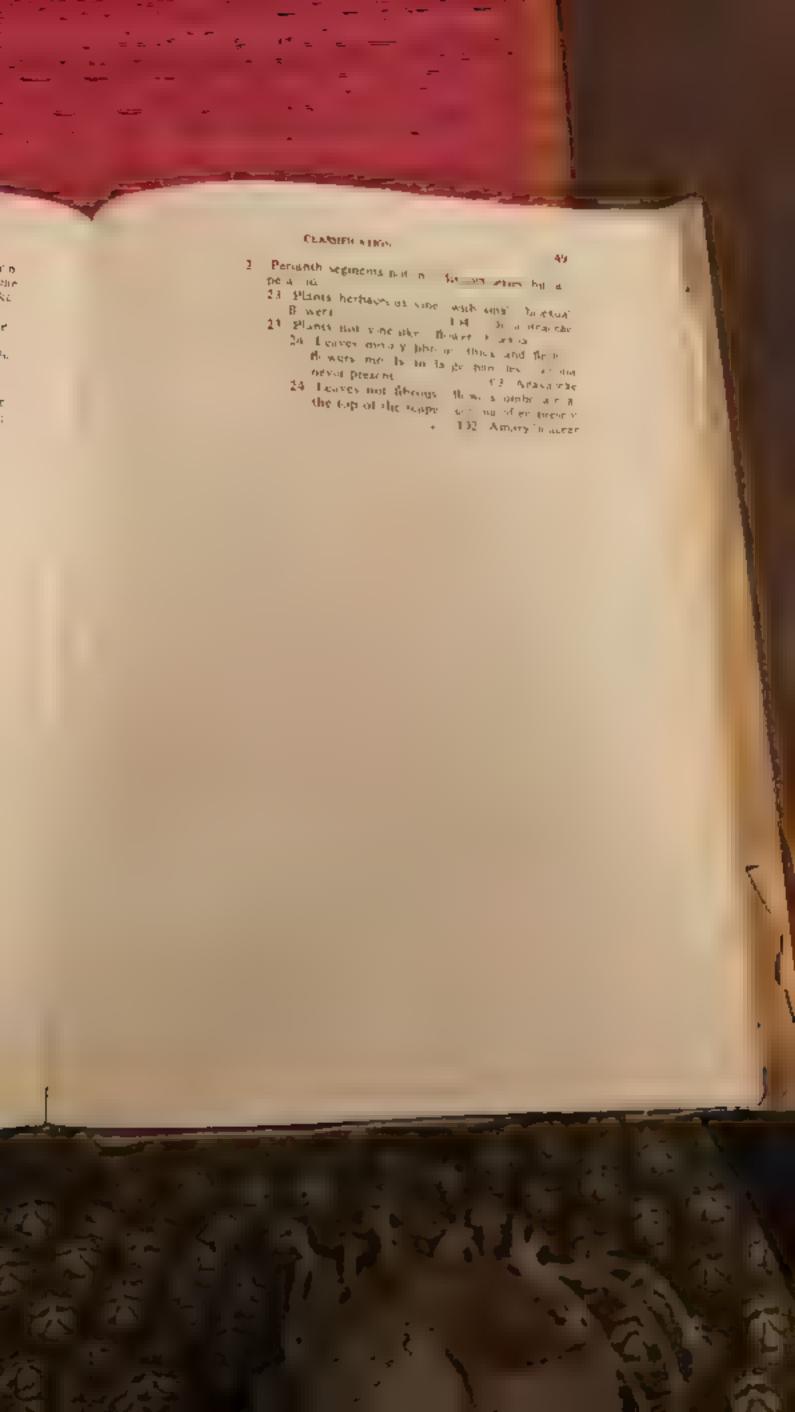


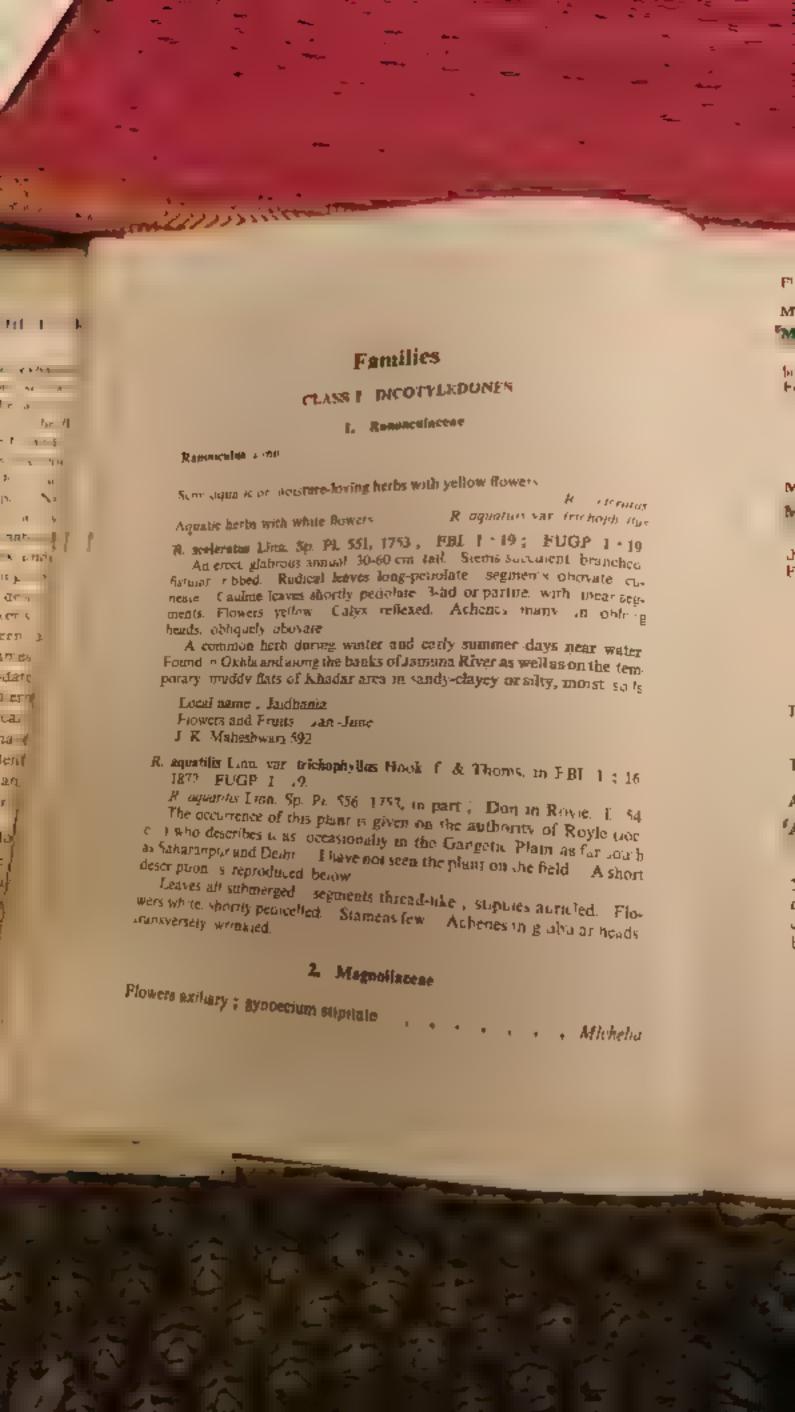


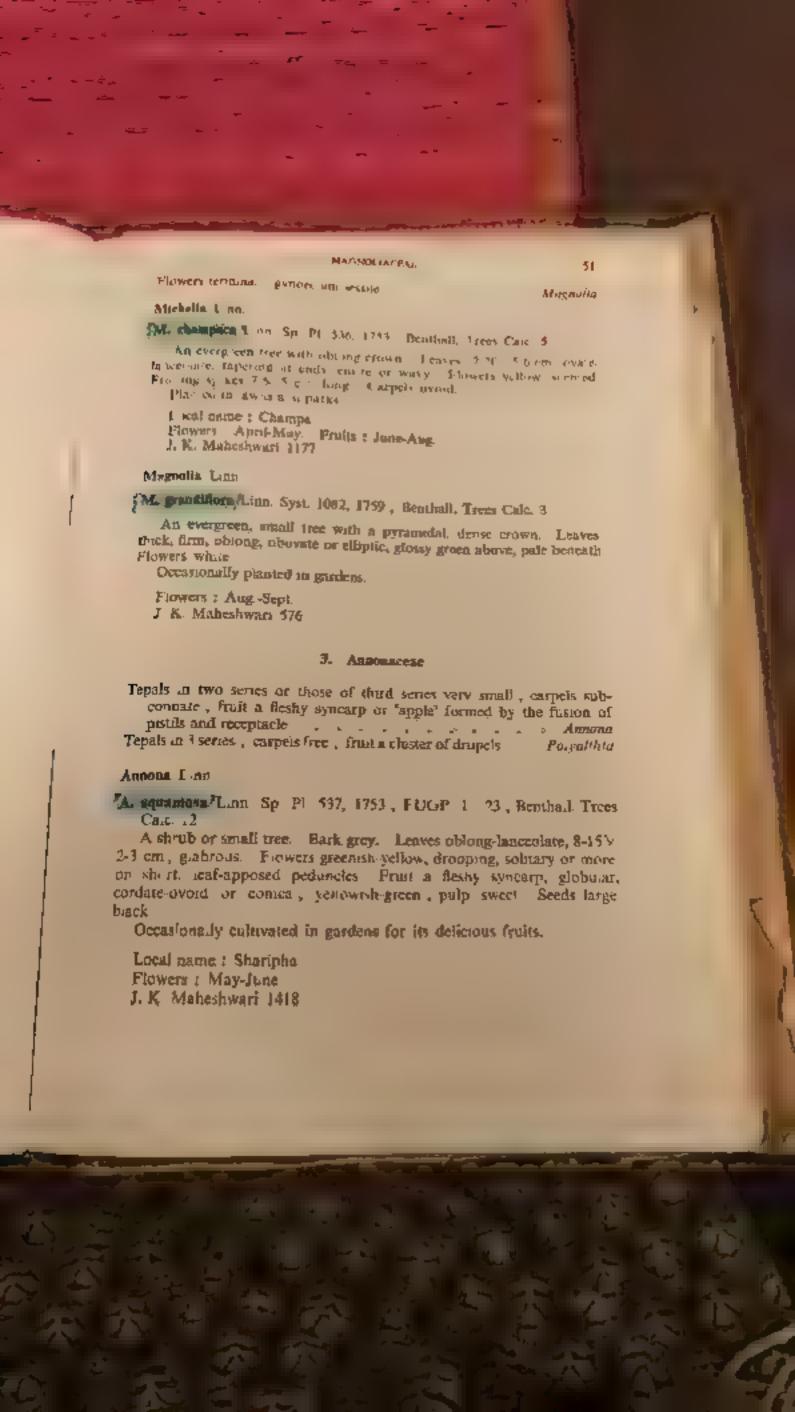
THE PLAN OF STREET 3. Leaves ex opicare THE FLOR 4 Trees  $t \in F_0$ # Perm or shub. 6. I solvers bracked, the bracks and sepals mostly so tious 4. Pu han h for ac like j li to exhaust & Figurers bear fees or of bracted the tracts not may house he so fa 85 Chem nod aceae tele Steen he out 5 Persanth not braci-like 7. Herbs or shrubs, sometimes straggling flowers ; is of the fl hence comes or ombels stamens a remate ve non-use \$ yo carne 7 Twiness: flowers in spikes esceines or panicles its said 86 Rasollacene stament not as shove oh NI LY WES ST 8 Non-parasitic herbs or shrubs, often climbing 88 Ar sip och aceae natural F Chlorophyll-bearing, woody, senti-parasites is unde 90. Loranthaceae to got Flowers passessal or polygamous \* descript 9. Male and (or) female flowers in cathans or spekes ACT S 93 Moraccae .0. Plants with malky pace neen fa 0. Plants without milky jusce I, Leaves much-reduced, stale-like ovules with numerous ames embryo sacs: fruit i-seeded, crowded mio a cone -cate! 95 Casparmaceae areas) If Leaves well developed ovules with only one embryo sac , nexi 96. Sa icaceae feuit many-seeded, a capsule 9 Flowers not in caption or spakes \* ha e . A Aquatica : penanth absent , carpel 1 : leaves finely dissected den≰ 97 Ceratophy aceas Arre Terrestrials On. J. Ovary 3-celled, with 1 or 2 ovules in each cell 91, Fuphorbiaceae إذرا 13. Ovacy 1-celled. 14. Leaves exstipulate LC 84. Amaranthaceae Leaves stipulate \* 15. Plants gromatic, fruit an achene 101 . 94. Cannab naceae A Plants nor aromatic. fruit a tamara, but, drupe or multipio : 16. Sap milky; fruit commonly multiple - - - - - - - . . 93 Могассно to. Sap not milky; fruit a samara, nut or drupe . . . 92. Ulmaceae

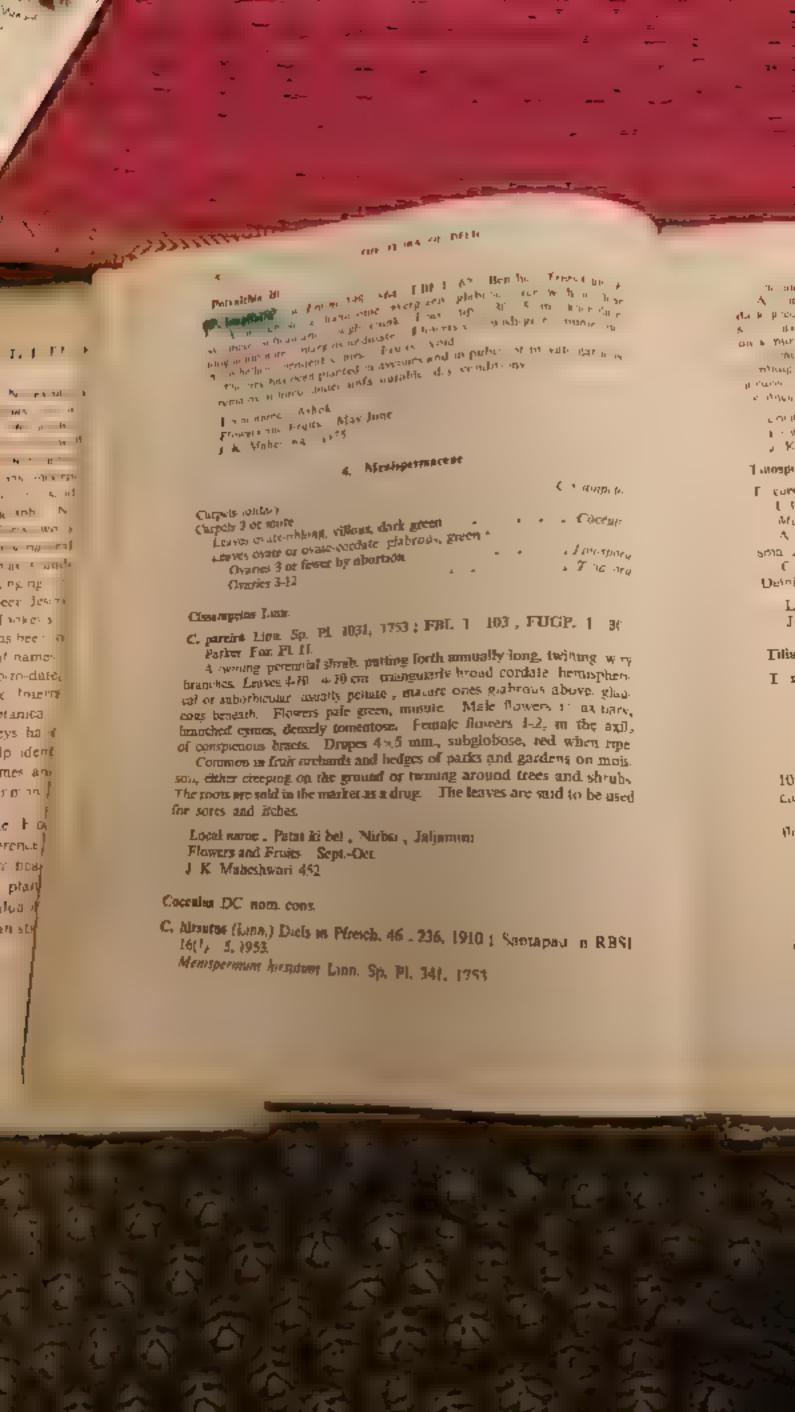


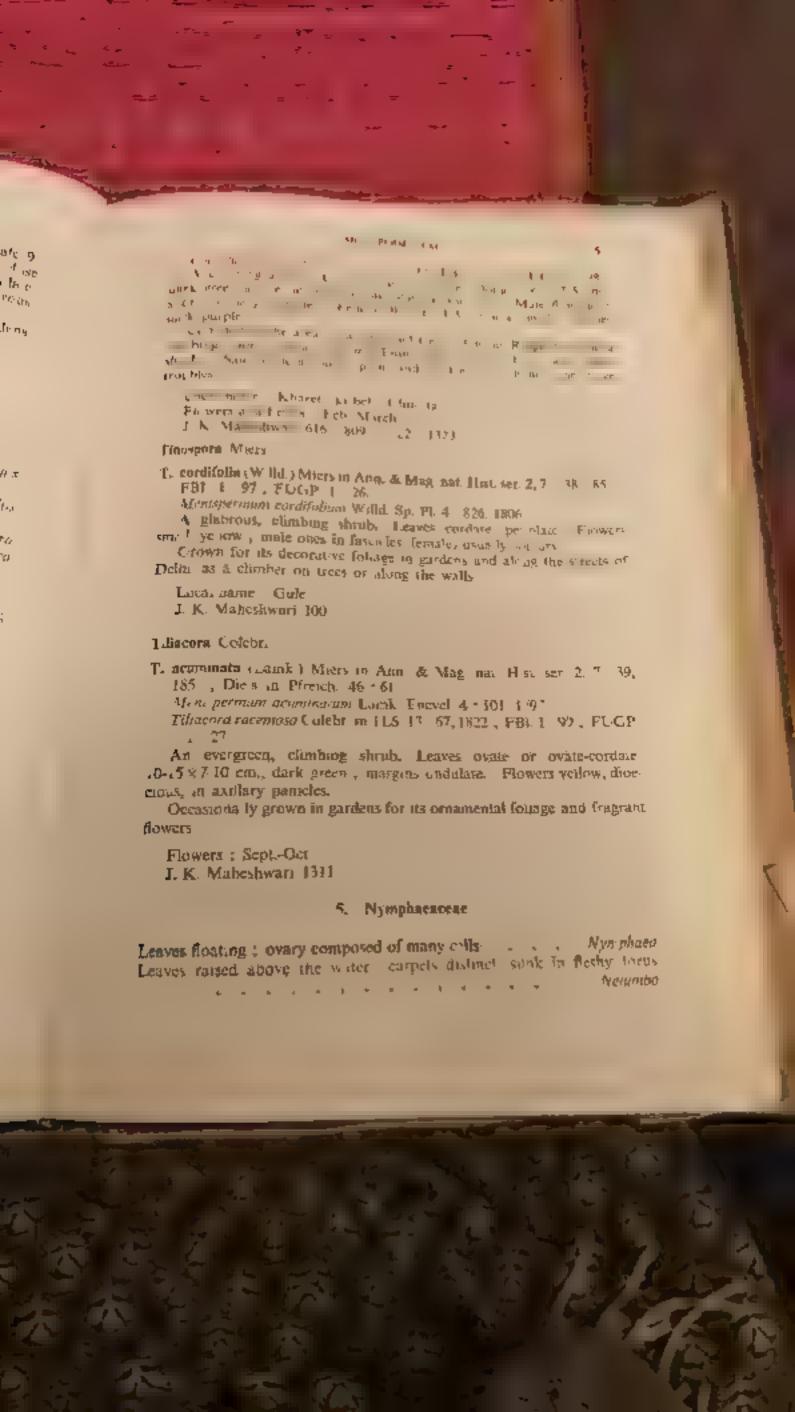


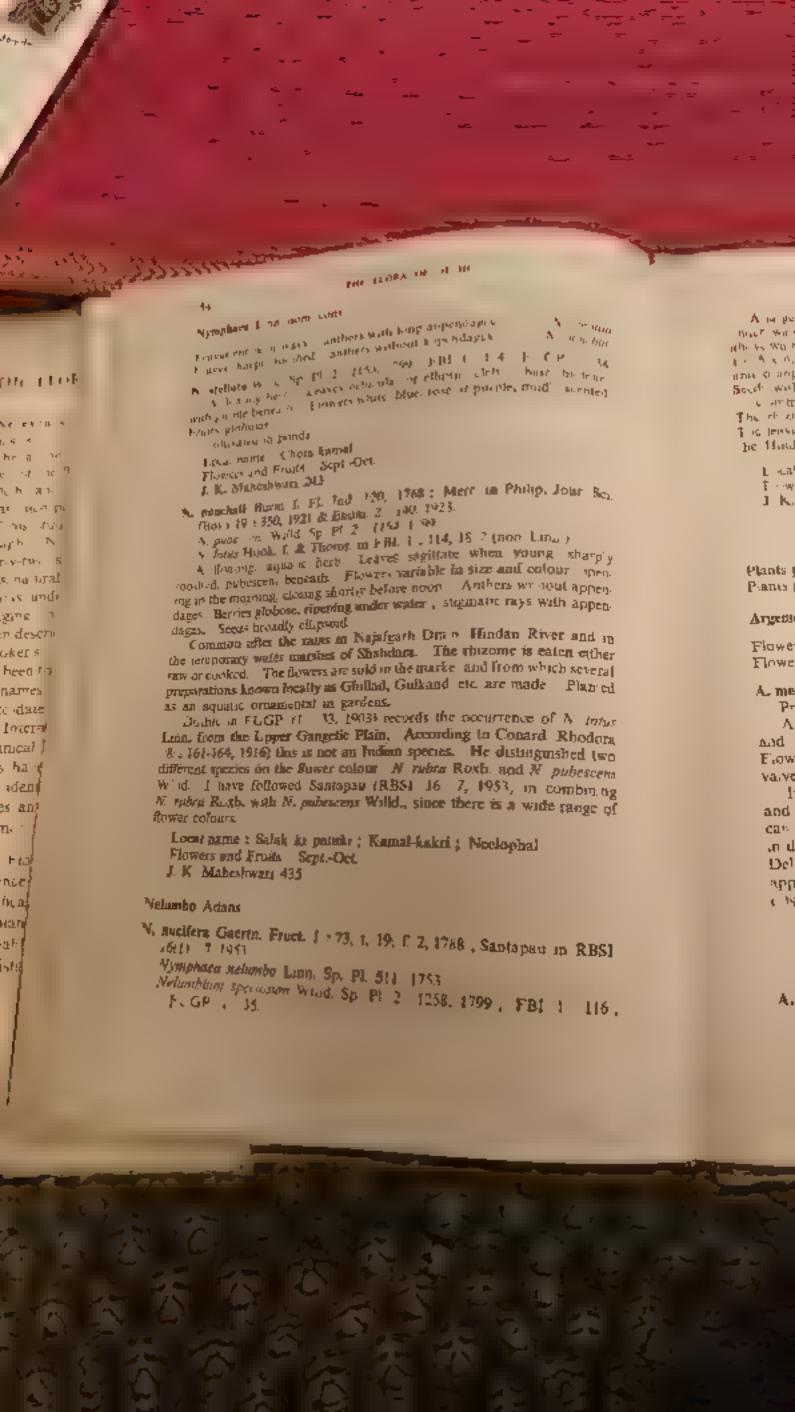


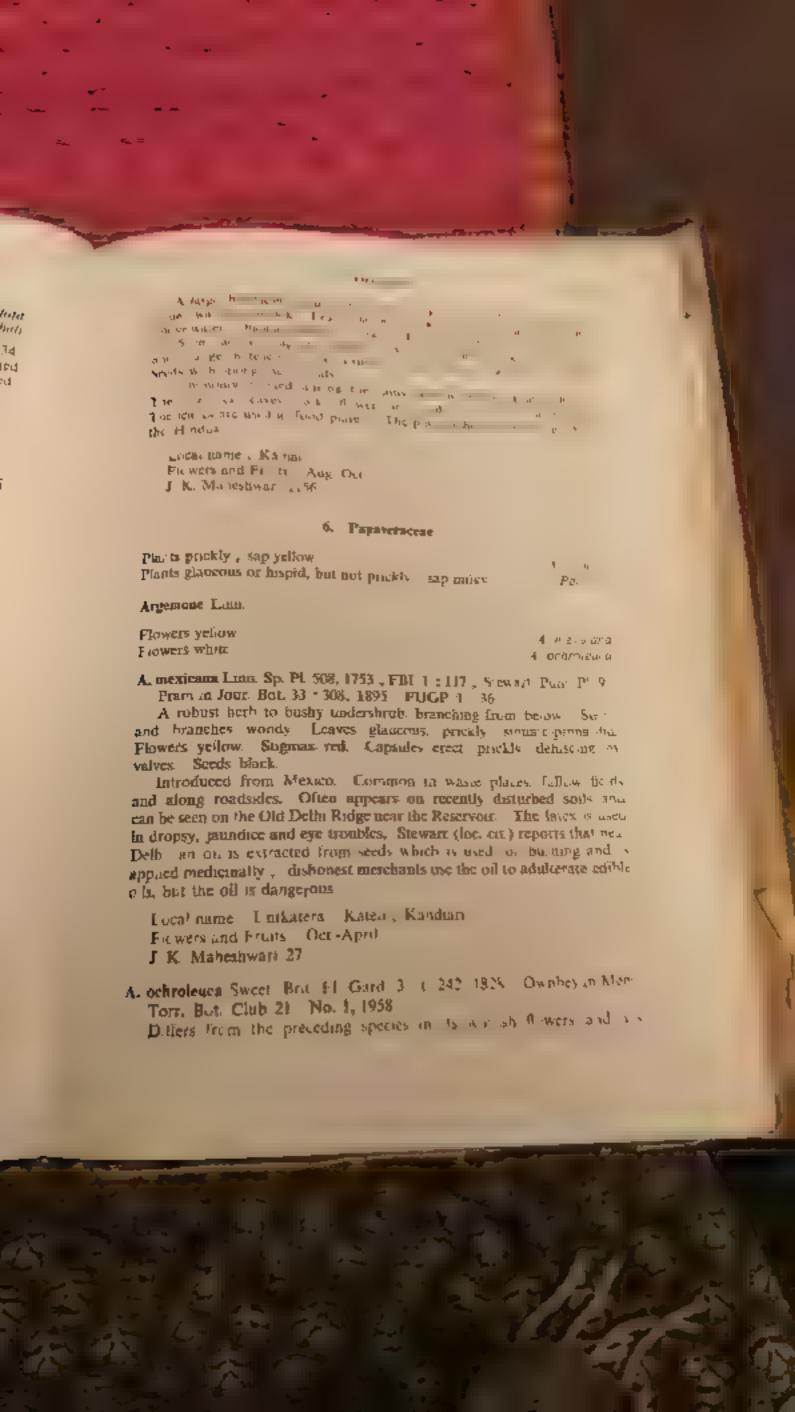


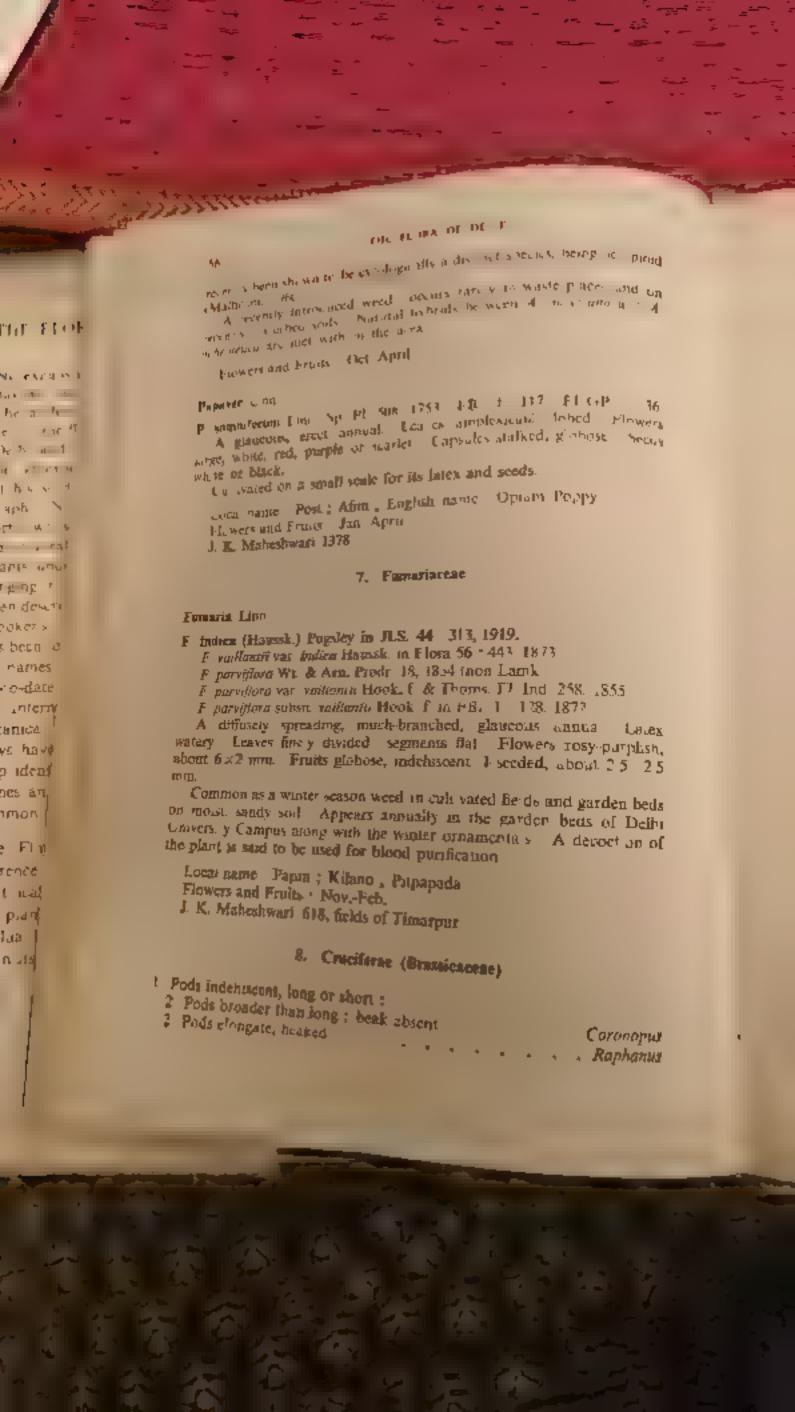












Sugarh. He

poid, celesce a large or scort.

ıď

T 25 ds terem or a apressed dorsally, many seeded 4. Pods king and narrow, seeds in 2 reads

5 I wer way at Peds paratimeres a socialment on

4. Pods short and broad , teeds 1 or 2-sec. to Ret appa 6. Hoary herbs : flowers white ; seeds winged 12, 89 cm 6. Giabrous herbs . Howers yellow , words o tore to

a Pods hing are above beaked a seeds to or Internte-· See See 7 Frowers yellow , seeds f-seriore 7 Flowers have at yellow with purple in no seeds having

1. Pads short, compressed lateralty, Assected Lenny Lepidiani

Coronopes Zant nom, cons

C. didymin (Linn.) Sm. Fl. Beit. 2:691, 3800 Excl. Cut. Vas. P. S.

Lepedium autymum I pn 5v i 2 433 & Mast 92, 1767. Senebiera pinnat frua DC in Mém. Soc. Hist. Nat. Par. 144 + 9 1799

A prostrate or ascending, branching leafy rather hispacherb often forming a rosette. Leaves pannation or promate parties, obes spreading. Flowers pale green, small, sometimes apetalitis, diandrous Pods 1 - 2 mm, separating into 2. indebiscent, reticulate topes. Seeds about 1 < .

A winter season weed. Highin variable in its size and appearance Found in he ds and open places on moist sandy soil; abundant in winter, rare in summer and early rainy season. The plants that survive till early summer become somewhat woody

Local name · Jangli hala ; Panacholi ; Halo Flowers and Fruits : Jan.-May J K Maheshwari 979, University Campus

## Raphanus Lapp

R. sativus Linn Sp. P! 669 1753, FBI 1 166 Fl GP A coarse, fleshy-rooted annual or bionnial. Reals variable in \$ 26 shape and taste. Flowers white or hilps with purple veins. Pods terete Cult vated during the cold season for its edible roots and young leaves. Some of the recommended, improved cultivars are Large Crimon, Contai short, Queen of the market, Violet Grant and Chinese Rose

Local name: Muli: English nome: Radish



THE FLORA OF PERMI

**48** 

Feet

CALIN

4 4 5

72 / 1

. . N

14 5

16.50

2 ,

. .

54.5

0 1

- 10

C.

3.1

577

VE

٠,

١.

Falser's and Ere 4. Dec June J. K. Alubeshinari, 168 - 981

Maximition R Br man cons N officiale R In in Ant I flort New 4 111, 1812, FB1, 1 133

A view are small both. Leaves dark purple in colour. Flowers Fe1 + 1 15 white a short stremes Pode stalked, cylindelcal, 10-20 x 1 5 mm Found occasions ) a one the banks of Jamona River in winter on

well buly some

Pagilish name Water-cross Figures and their February J. K. Maheshwari 845

Rorisps Scope

R. Indica Leaf margina toothed ... R. mantana Leaf margina entire .

R. Indien Line ) Hiern, Cat. Afr. Pt. Welw. pt. 1. 26. Add t. & Corr., 1896. Saymbrium Indicum Lord Mant. 1 93, 1767 Nasturition indicion DC Prods 1 139, 1824 FBI 1 134 FLGP 1 39.

An erect, giabrous or hairy annual, 15-60 cm. tail. Radica, leaves pmuatifid lobes toothed Upper Itaves lyrate Flowers yellow, small, in long racemes Pods 1.2-2 : 0 15 cm. parrow, cylindrical.

Found in moist places in gardens and waste grounds. The seeds are used in the treatment of chronic fever

Local name: Khubkaten Flowers and Fruits : Feb. July

J. K. Maheshwari 698, 926, 1160.

R. montana Small, Fl. S.E U.S. 1336, 1913.

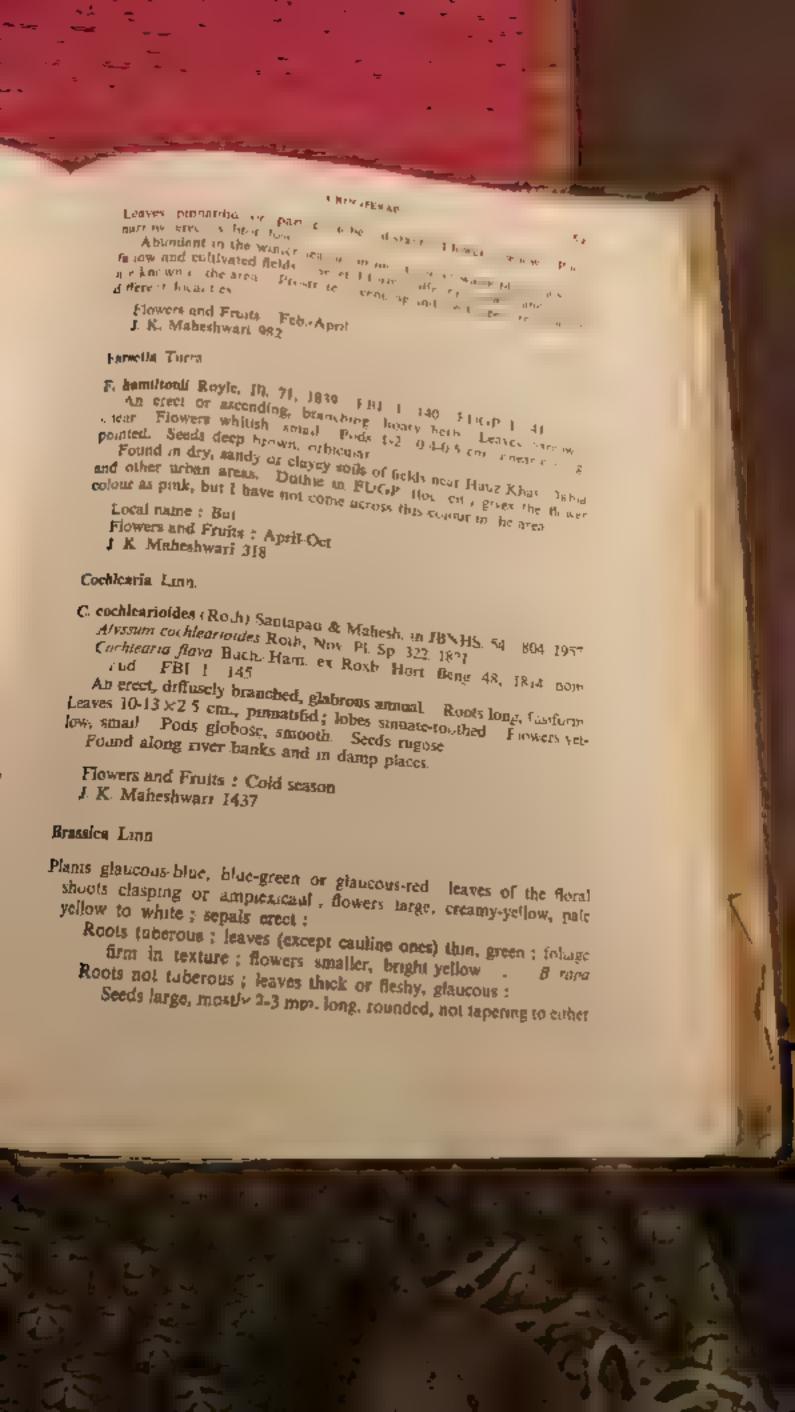
Nasturtum montanum Wali, Cat. 4778, 1831, in part; FBI, 1 . 134 .

An erect, branching herb Radical leaves pignatifid or not, lobes entire Flowers you we Pods 2.5-4 - 0.15 cm., narrow, cylindrical. Common in damp piaces to gardens and waste ground. It much resembles the preceding species except for the leaves.

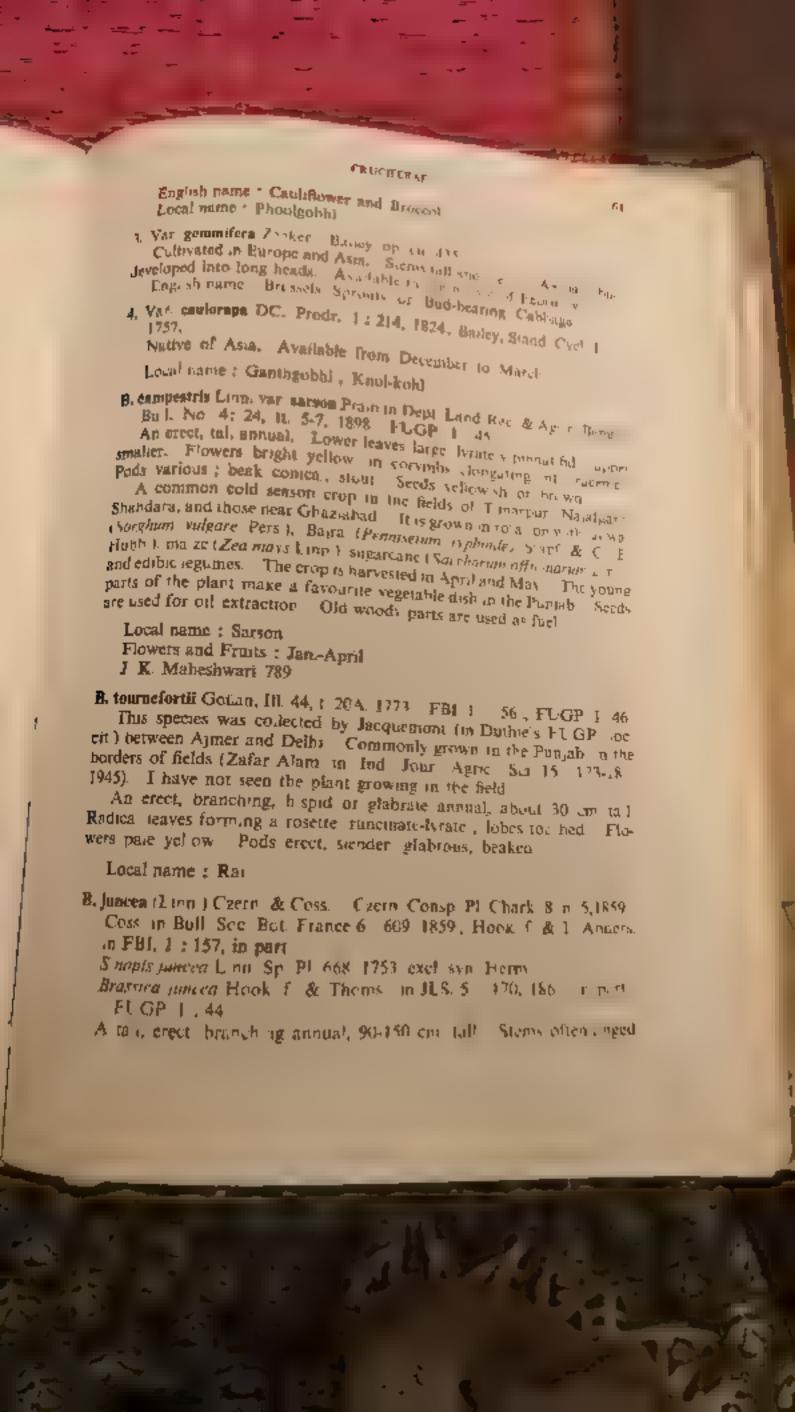
Flowers and Fruits Feb July

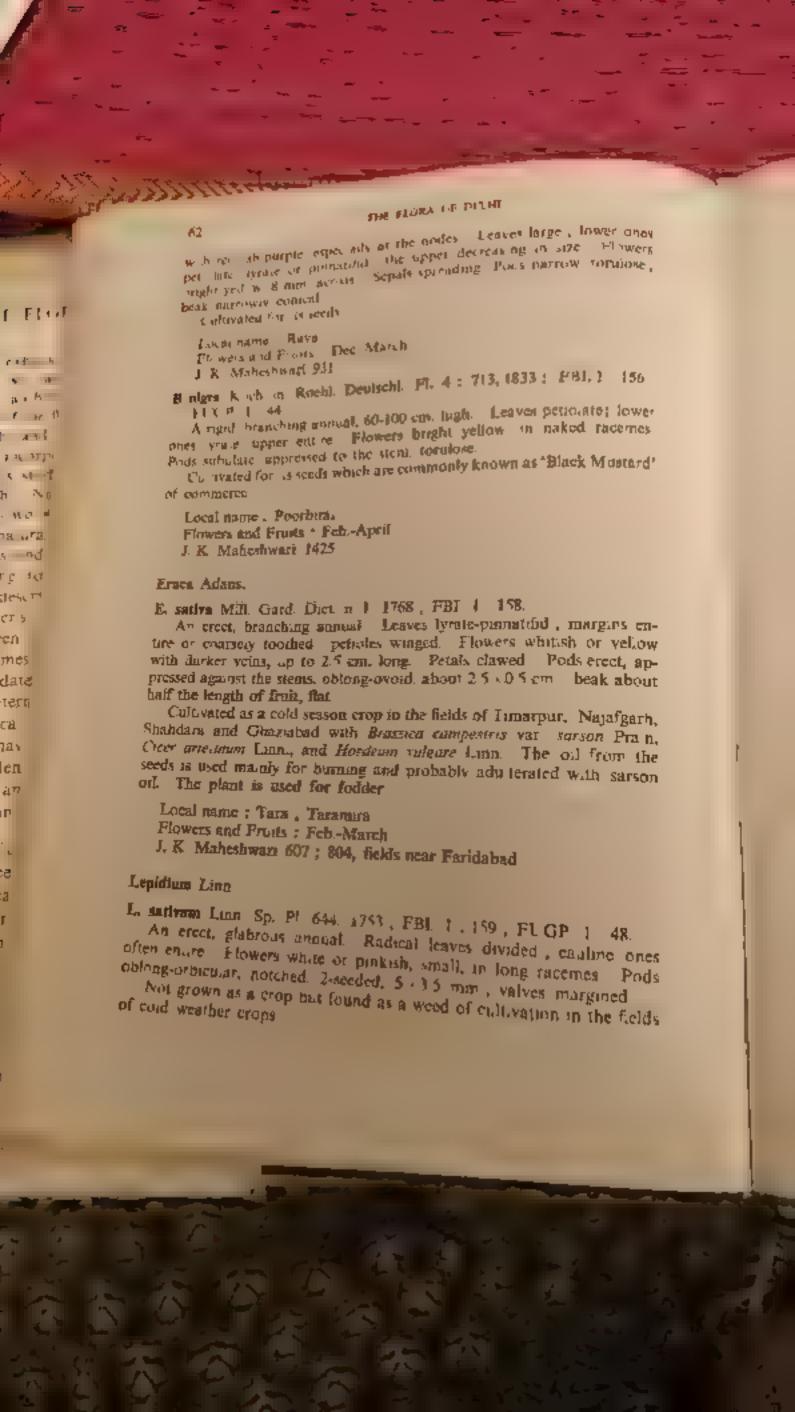
Sleymbrium Linn

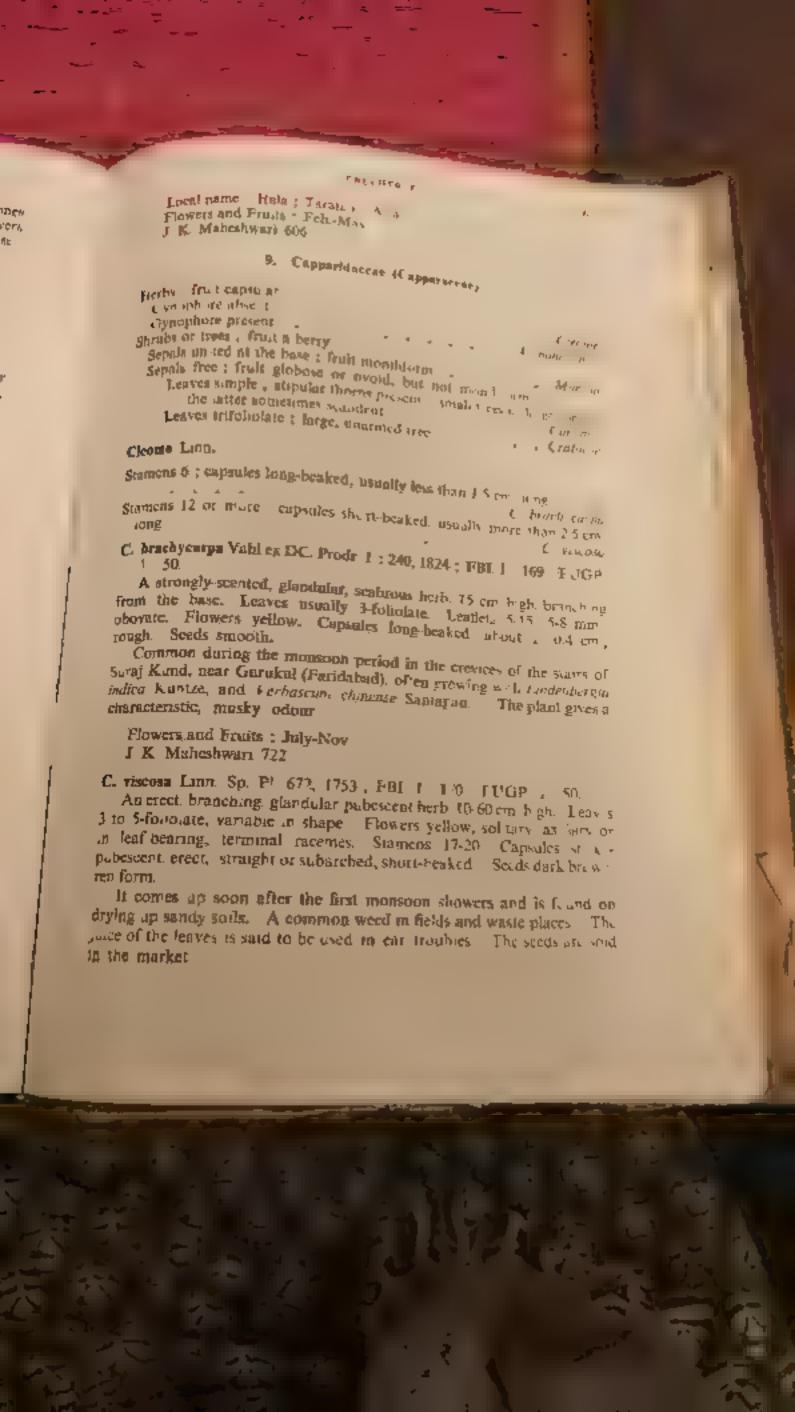
S. trio Lino Sp. Pt. 659, 1753; FBI, 1:150; FUGP, 1:42. An annual herb, highly variable, 20-60 cm, tal.. Stems 2-10 mm, thick.

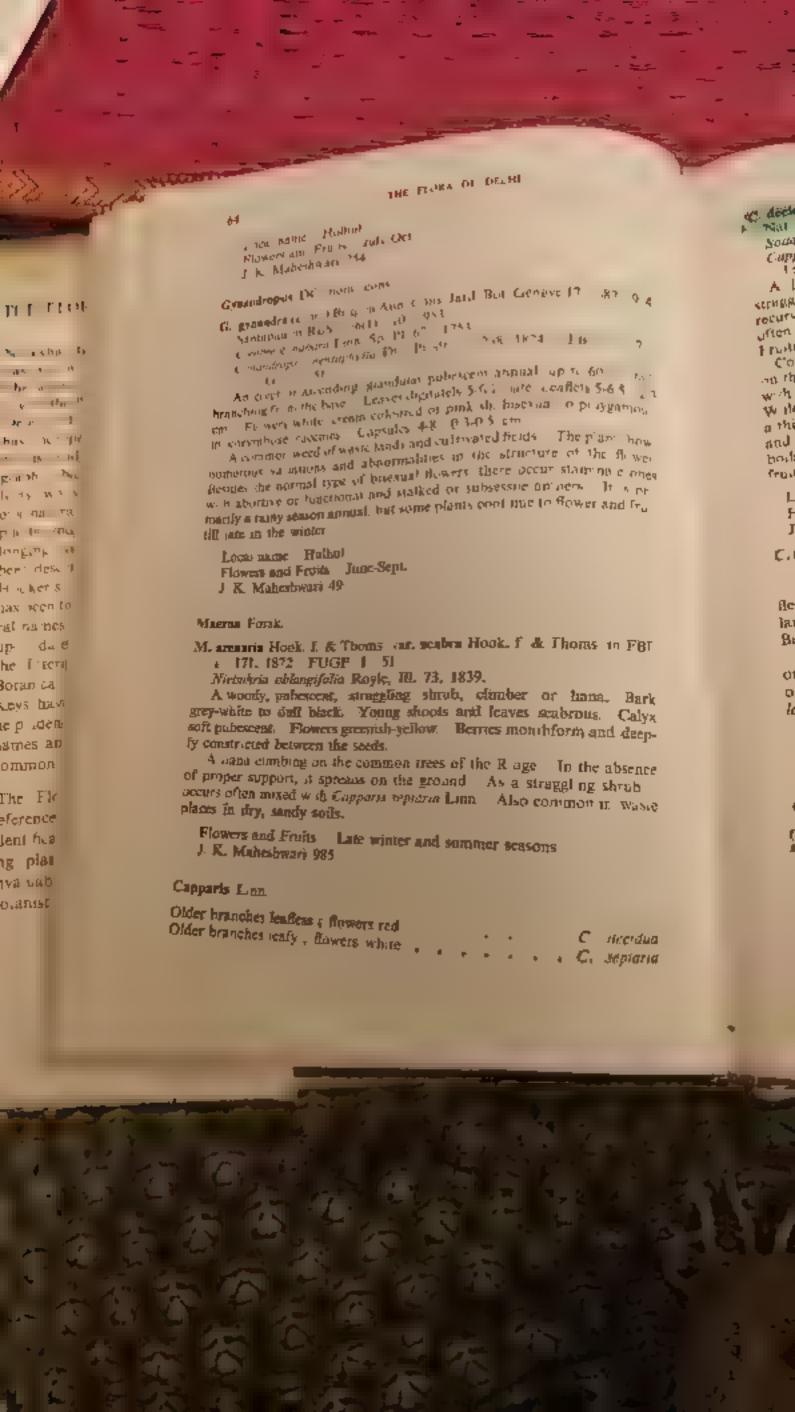


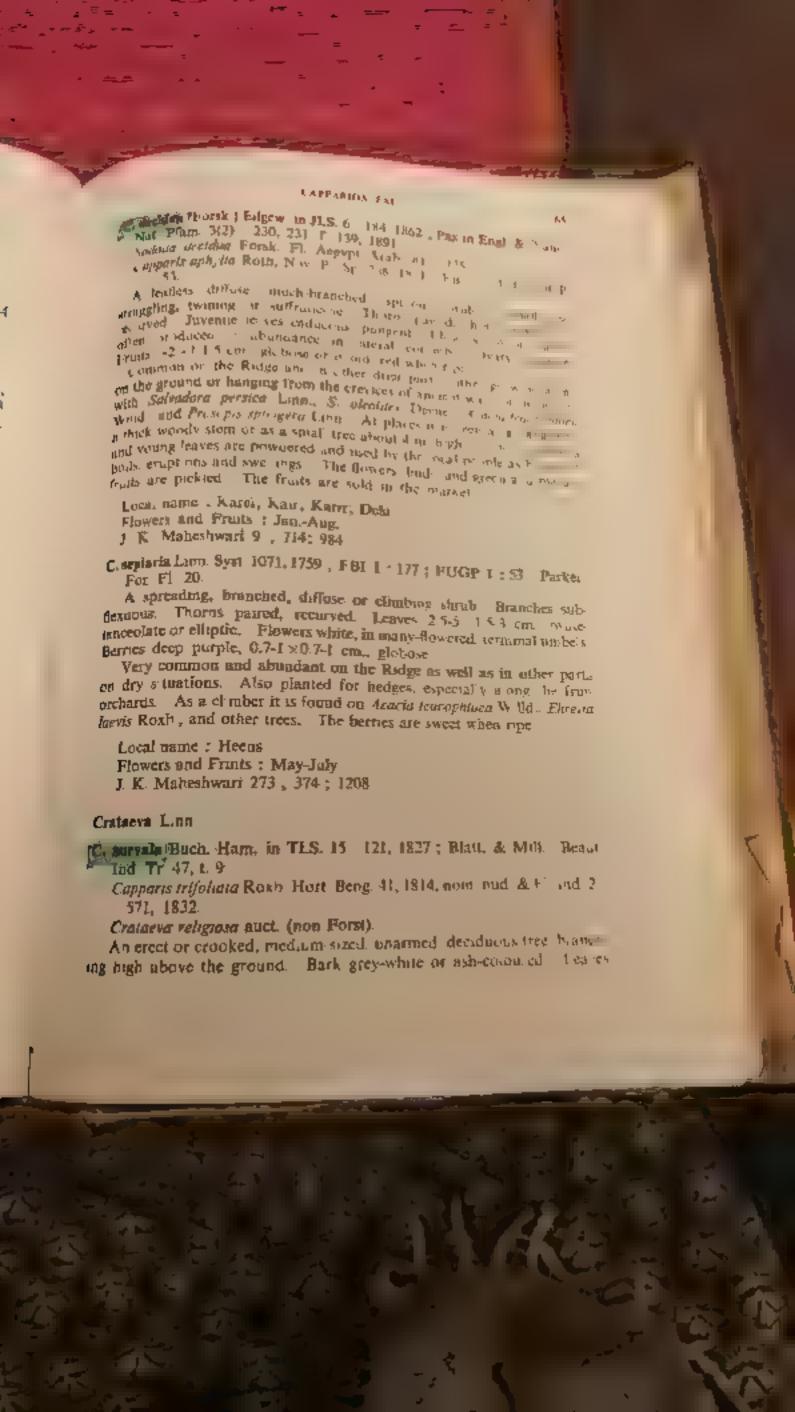
THE PLONG OF DICHI end nor cornered , leaves thick, fleshy, obovate or oblong 60 Seeds amala, moster less than 2 print units or broad complete. angled or connected fower cases lyra on new aid, upper ones oblong, programmity conduct asymptomical THE FLOR B compasses var, squam Please green or slightly glaucous : leaves of the floral shoots not promnert v clasping, flowers small, light to not only we was supplied erect No cab is rais see fic cases missily in radical rosettes, pieces hoped hi apresso th H tournet t the much t I cases he de above green or throw glasse site C+ 1 1 0 Pous ong terete if nearly so a pedict's spreading B paner Pous shere autmetty 4 angled, projects and p ds approved De to and as therein B wgra f his sell B. rapa Lone Sp. Pl. 666, 1753 Barley, Man. Cts I. Pt. 436 aph Na A tall creek branching annual. Stems often tinged with redd shi purple, especially at the nodes. Leaves tyrate or prenatifid the apper THE WO S decreasing in size. Flowers white or pale vellow starked. Pods slender, is not rean 5 t 10 The tender roots are cooked as vegetable and used as forage it in But en descri Local name: Shalgani, English name, Turnip Flowers and Fruits . Dec.-March. CACT 5 heen fo B. oleraces Lann. Sp. Pl. 667, 1753; Barley op . t 435 names Flowers large, creamy yellow Petais long-clawed Probably a native of Persia and the western parts of Asia. Found to date n India only in cultivation. The following varieties are grown in the Intern State : ицсаі Var. capitata Linu, Sp. Pl. 667, 1753 Blatt. in JBN/1S. 34 - 297, s havi Native of Europe and Asia Steras short and thick Leaves closely. (den) packed late a large bud or head CS an The cust vars Savov Perfection Drum Head, Golden Acre, Sugar men Louf, London Market, World Bester and Copenhagen Market, have given good results in the area and are available in the market from January  $F_{iij}$ nce English name . Cabhage 1.3 Local name : Bandbagobhi 1127 2 Var botrytis funn Sp. Pt. 667, 1753 . Barley, op. c .. 436 tab. Native of W. Europe. The head is formed of condensed and thickened flower clusters. The recommended courvers in the State are J. Early Lordon, Early Snowball and Large Whitecape. Available in the market during October and November

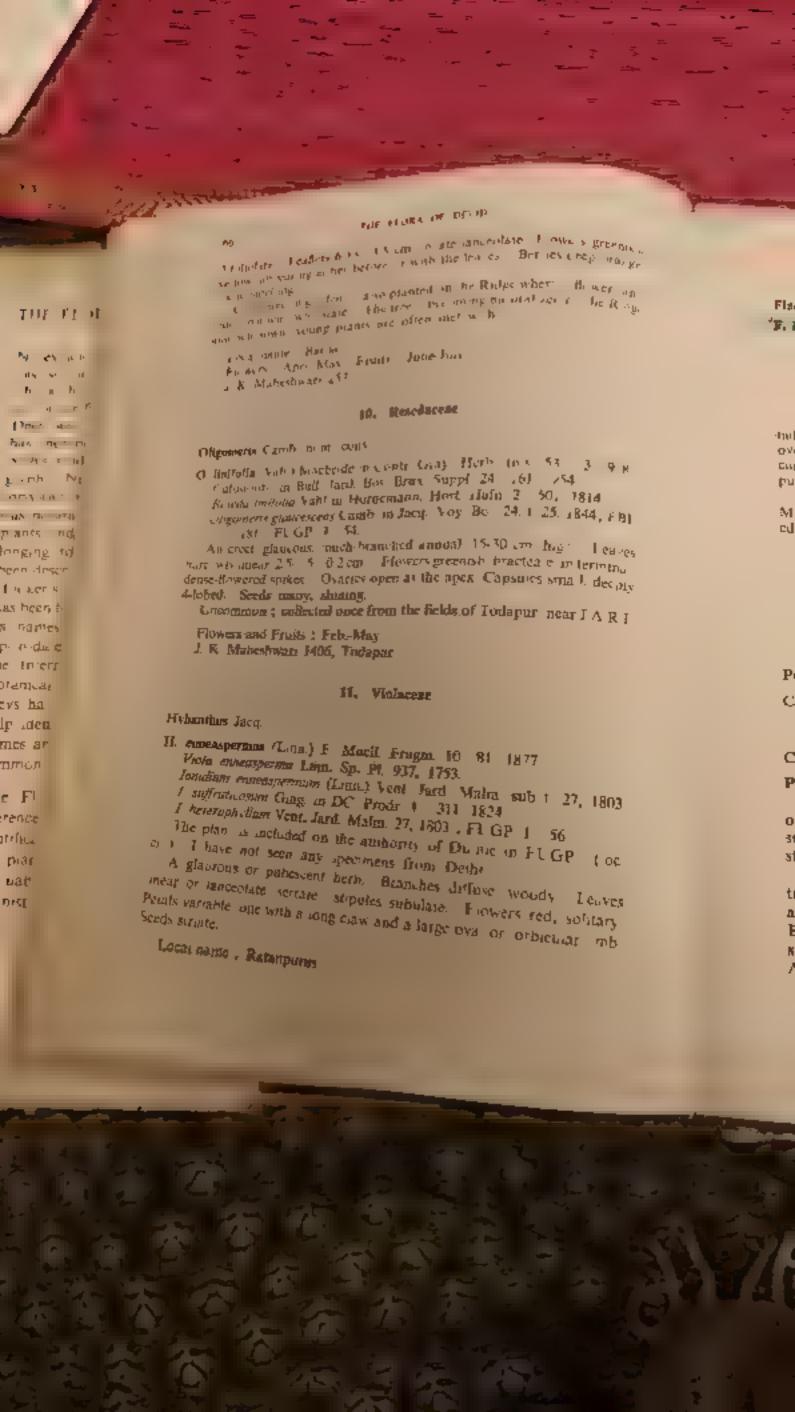


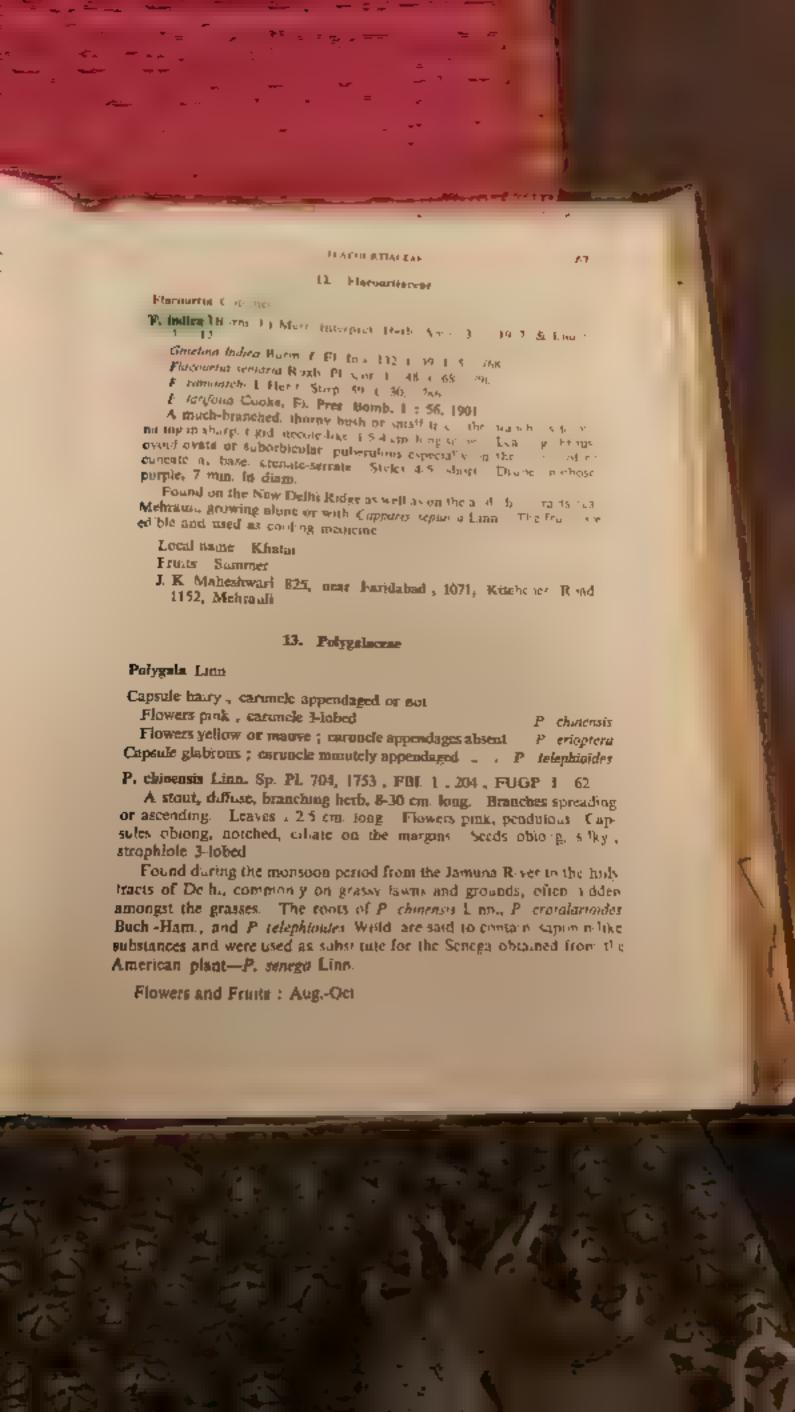


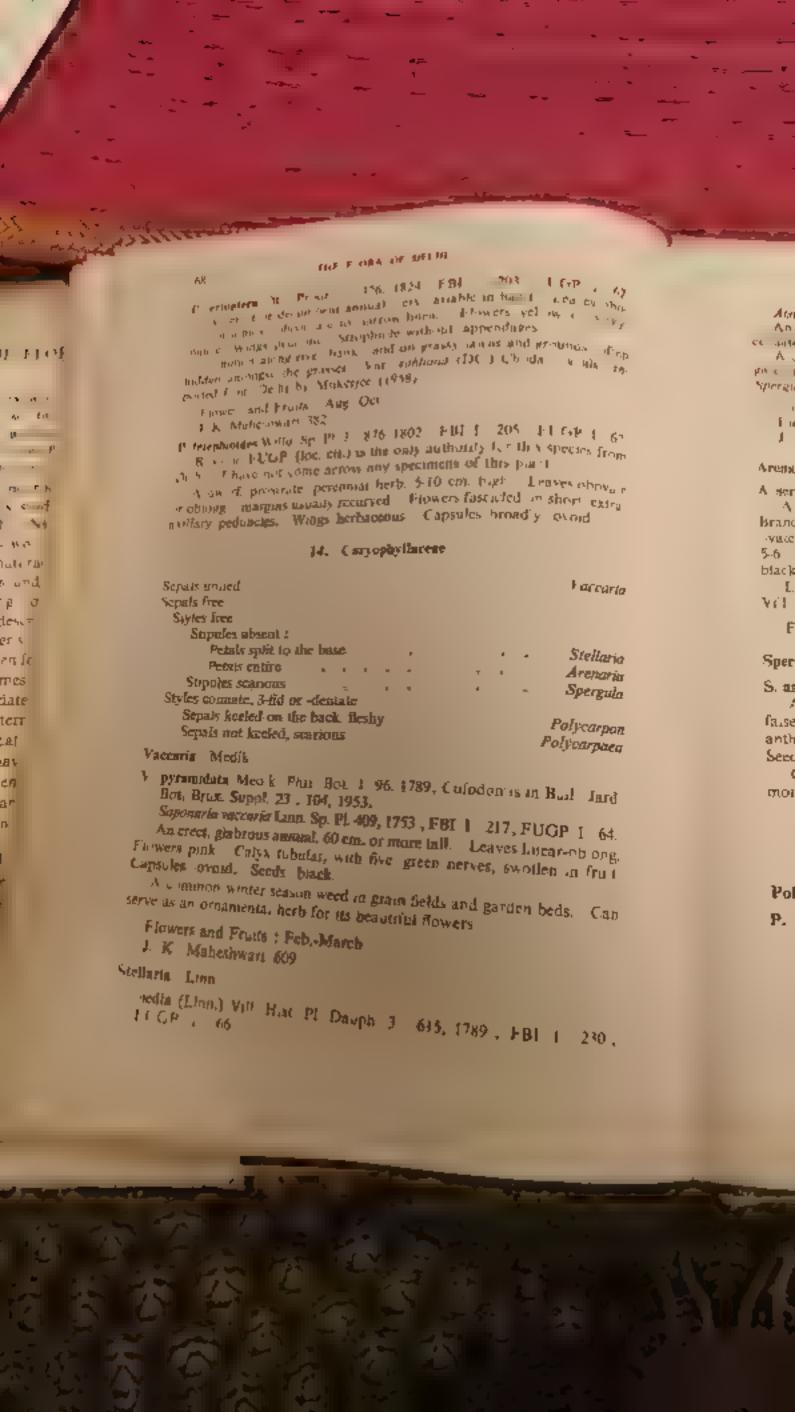


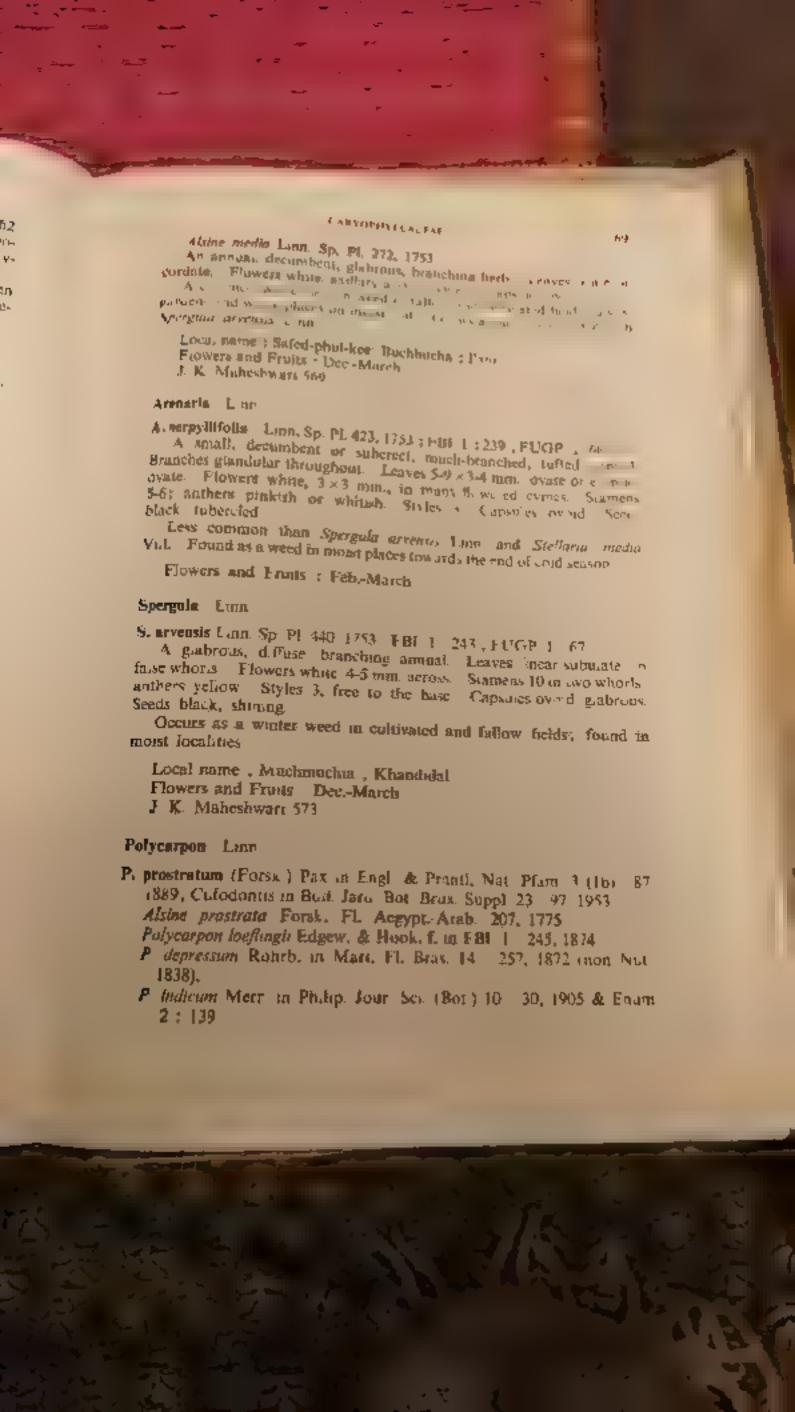


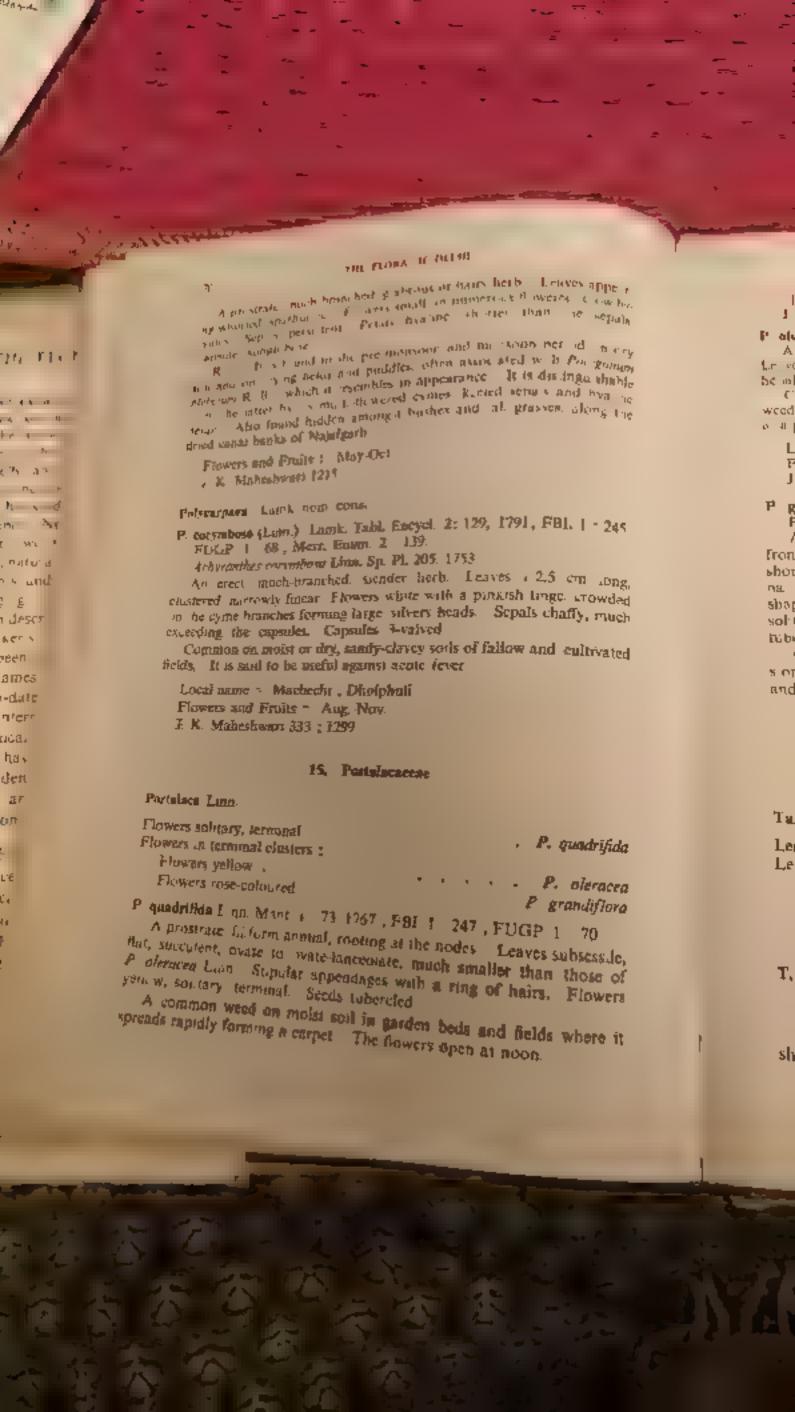


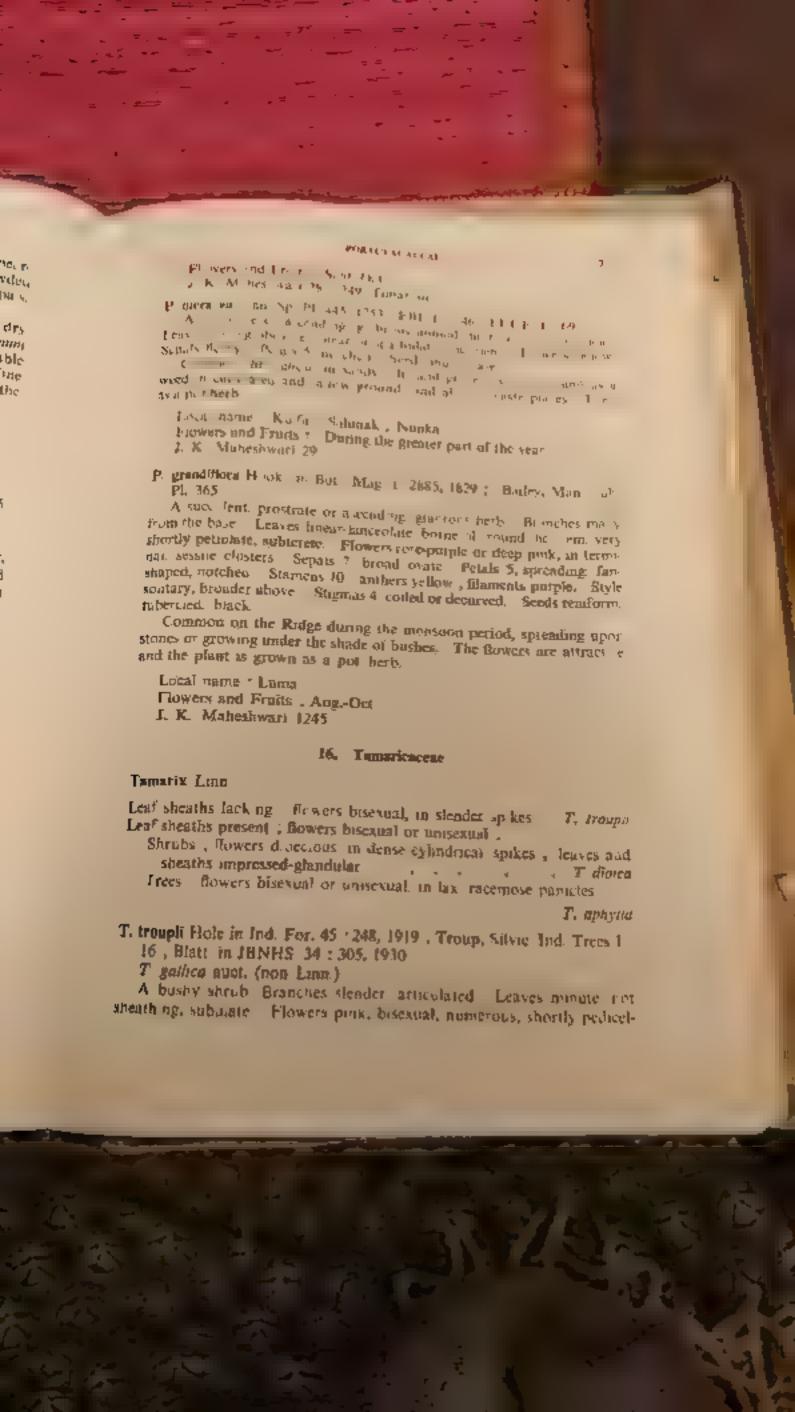


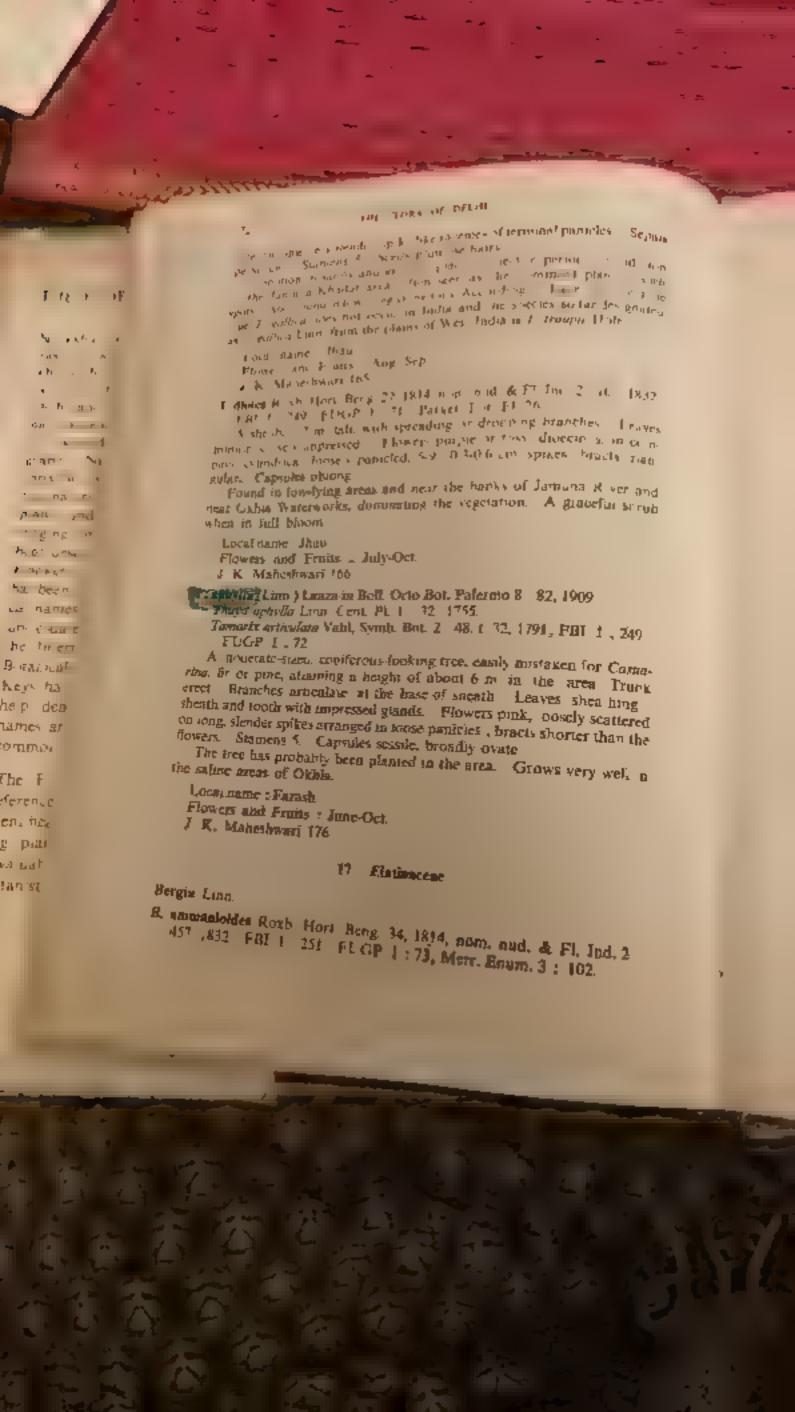


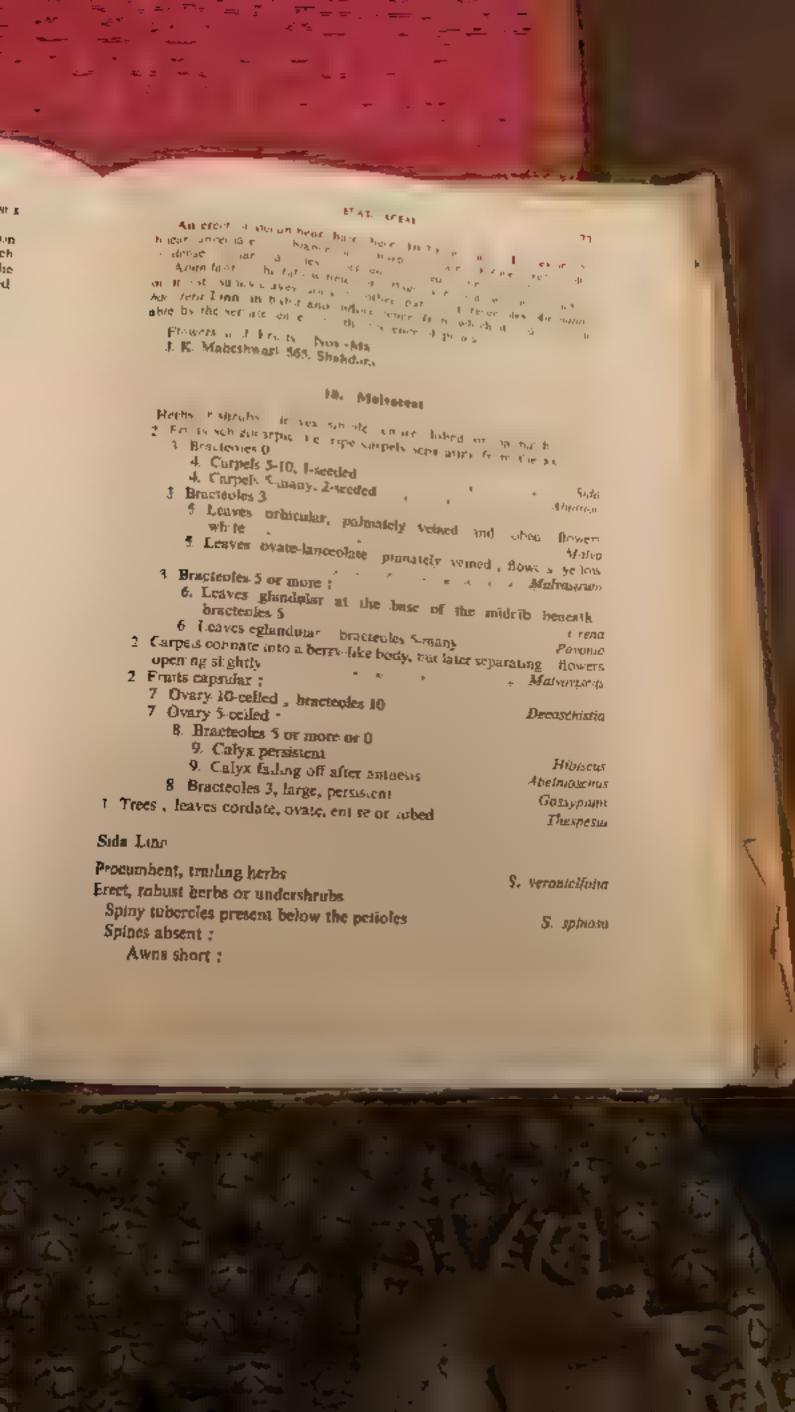




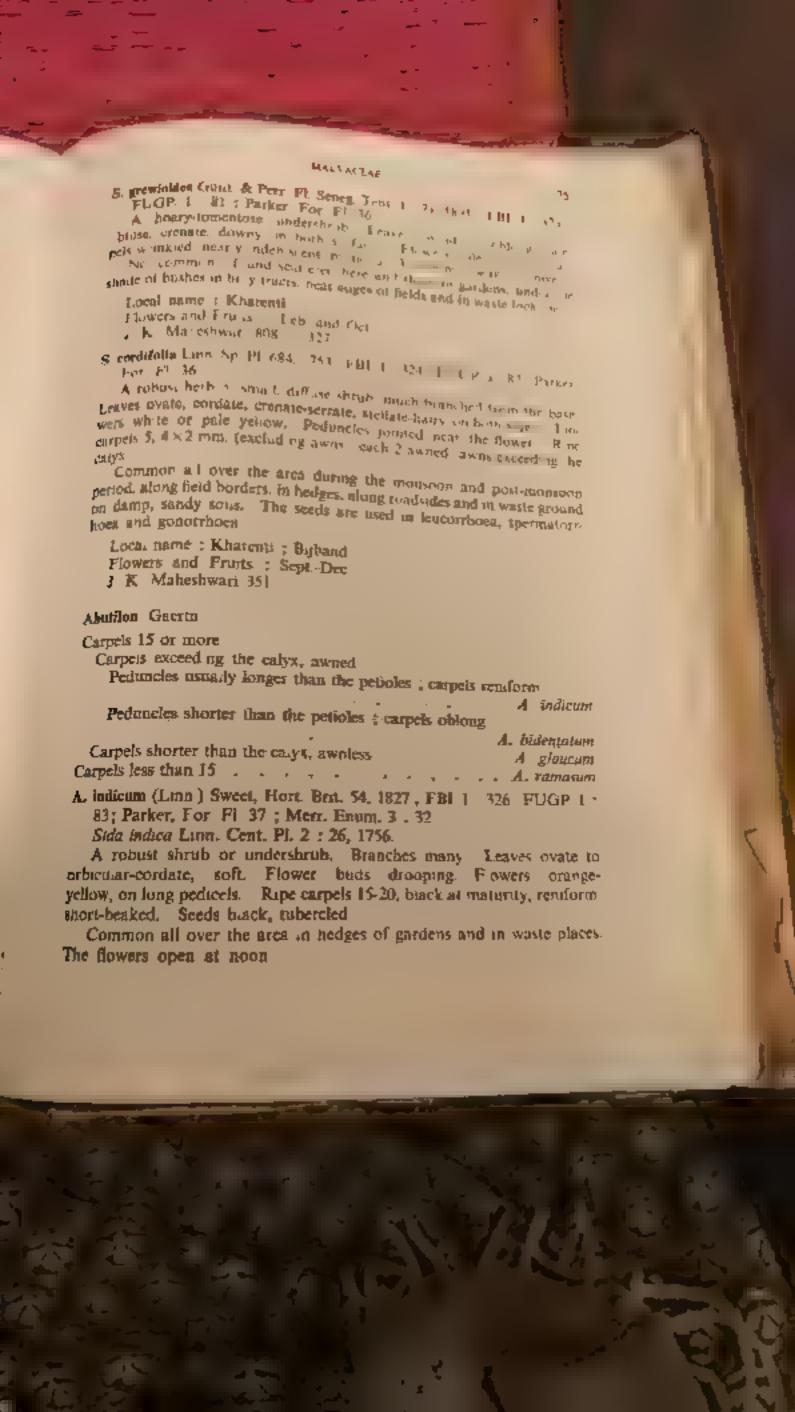




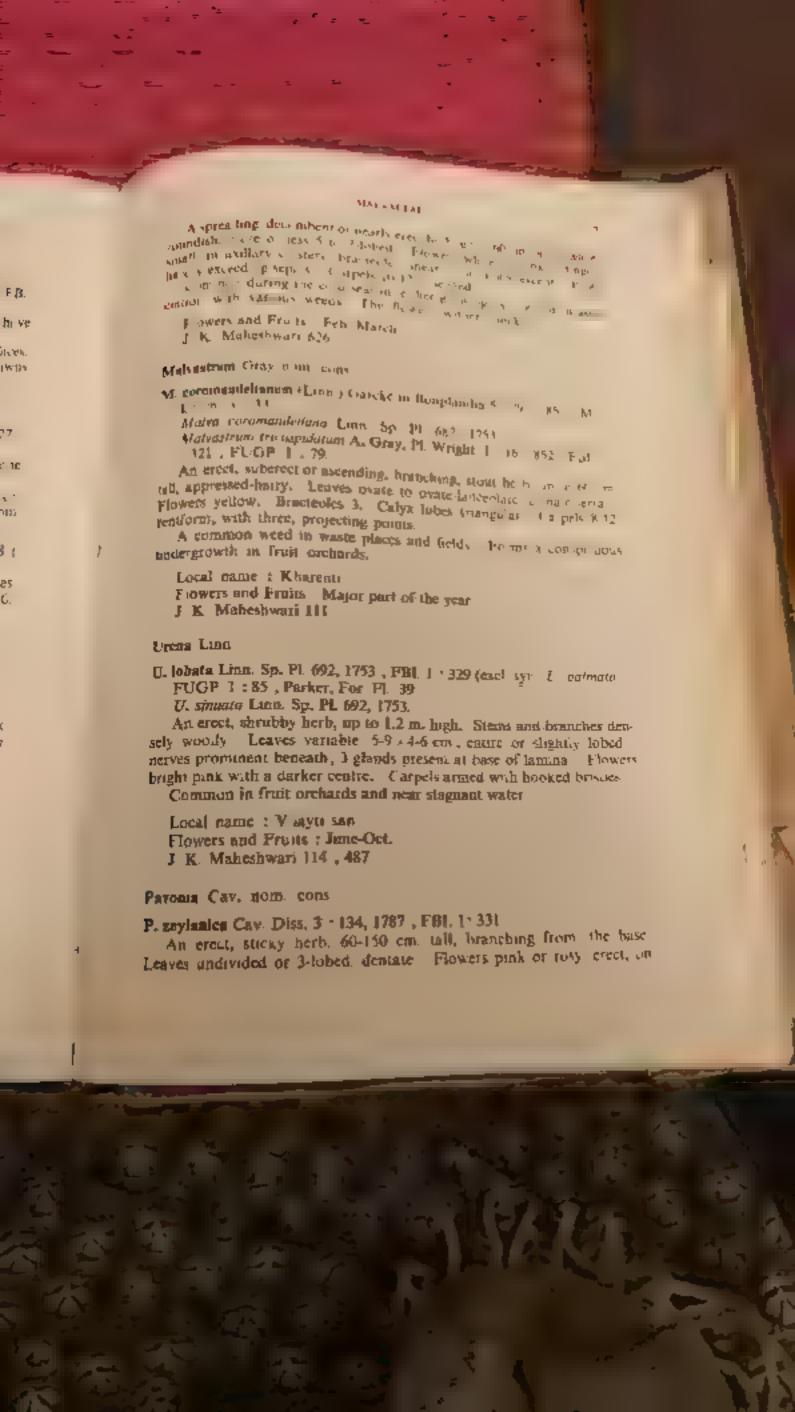


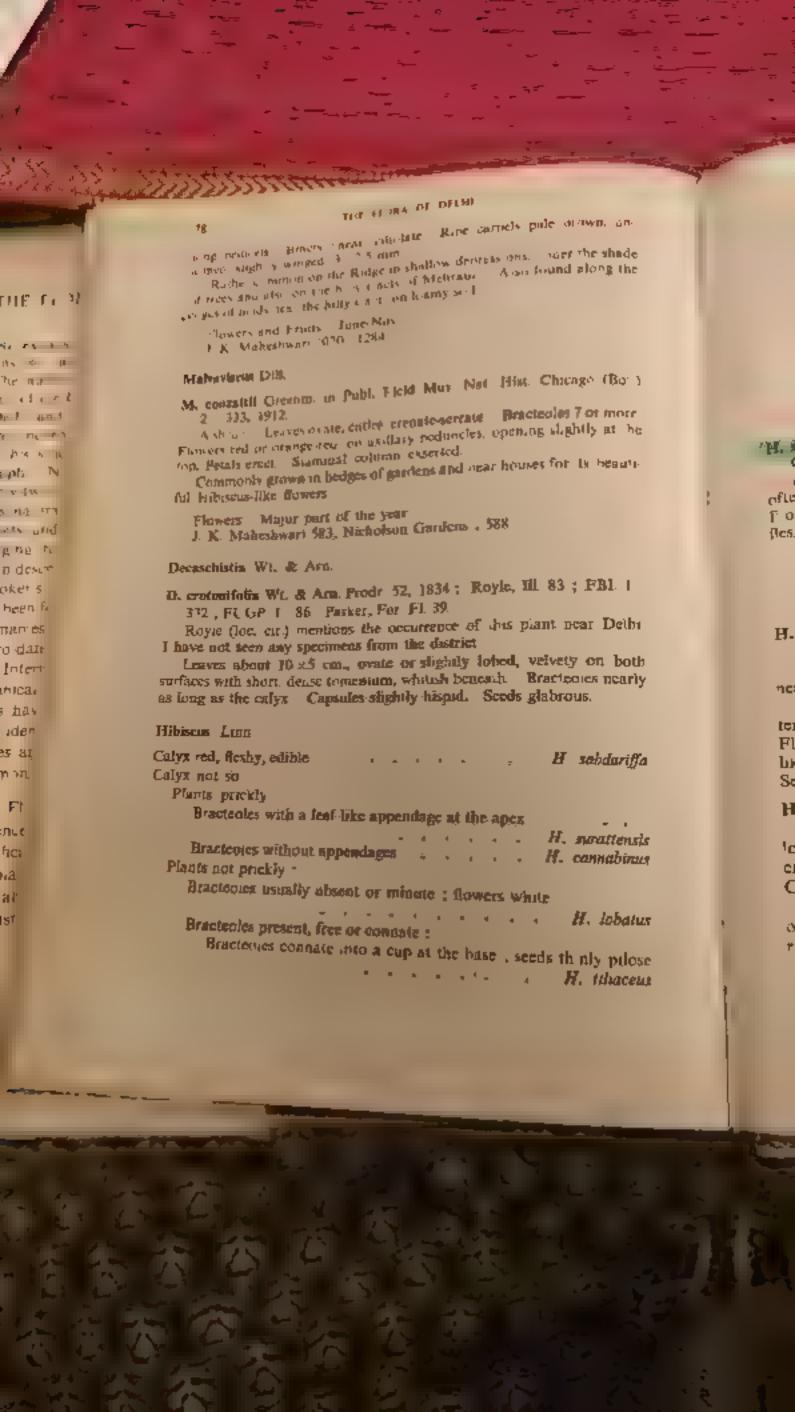


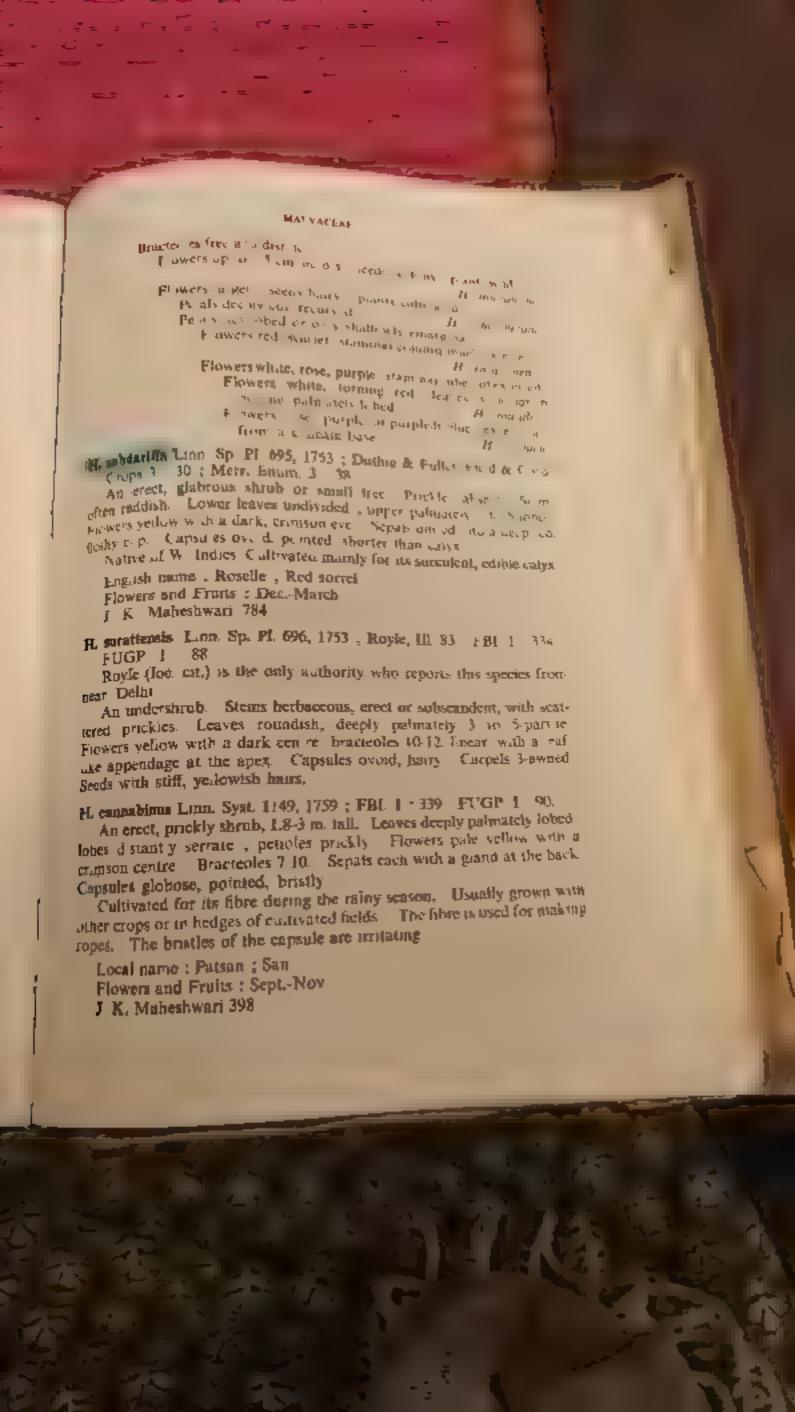
THE PLORA OF DE H. 74 Leaves broad a oberate house beneath ped neles cament hour s chombitally var abusain the middle Leaves or an to bloom cause downs in mise suit on THE HOP S grewiontes Awar excessing the cather, leaves downly on both surfaces S. cardificha No order of S. vermiloffelte Lamik Bucyce 1 5, 1783 . PUGP. 1 , 10 , Parker Friq F & 40 Car the as her 77 14 A deep-rocted training herb with several branches from the root to I the in stock, loosely heavy throughout Leaves broad over a o's thorhicular Sp. h und cordate crenate-servate 2-4 - 2 3 5 cm. Flowers pale orange about 45 100 em series, is unity solitary, avillary on long pedice's. Rine carpe e s 17 4 51 3 amough, shortly macronate. (20 N) Common throughout, especially in moist, shady places and often hidden amongst geasses. MY WC A s nat ra Flowers and Fruits : June-Oct J. K. Maheshwari 84 : 729 INES I'M S. spinnes Line. Sp. Pt. 683, 1753 . + 81 1 123 (excl. syn. S. alnifolia gre to Line.) , FUGP 1: 10; Parker For FL 34. 7 desir S alba waa 5p. Pl 960, 1762 ACI S A woody much branched fierb or padershrub. Stems and branches been rough, with spidy tubercies at the nodes below the penoies. Leaves ames. ovace to ovale-tanceolate, crenate-servate, glabrous above. Flowers white. Ripe carpels 5, topped by two, exect, rough beaks. a-date Common in the village Vailabgarh along the edges of cultivated averr fields and near canal banks. Also met on waste manure heaps in the nicar University Compound. Dav. Flowers and Fruits - Sept-Oct. ideni J. K. Maheshwari 1294 ar S. rhombifolia Line, var oborate Mast. in Hook, f FBI, 1:324, 1874. 24 FL/GP. ! . \$1 : Parker. For Ft. 35. Much-branched undershrub. Branches ascending. Leaves variable, 44 broadly obovate or nearly orbicular heavy beneath, base caneate, margins toothed at least o the apper half. Flowers pale orange, axiliary 4.6 or clustered at ends of branches , peduncles jointed near the middle. 13 Carpels usually 5, each shortly 2-awaed. ш Common in waste ground near gardens, open fields and along canal H banks. Comes annually in the University Compus in the hedges of the Cricket Ground Flowers and Pruits : Sept.-Oct. J. K. Maheshwats 401 , 5,2 , 13,3

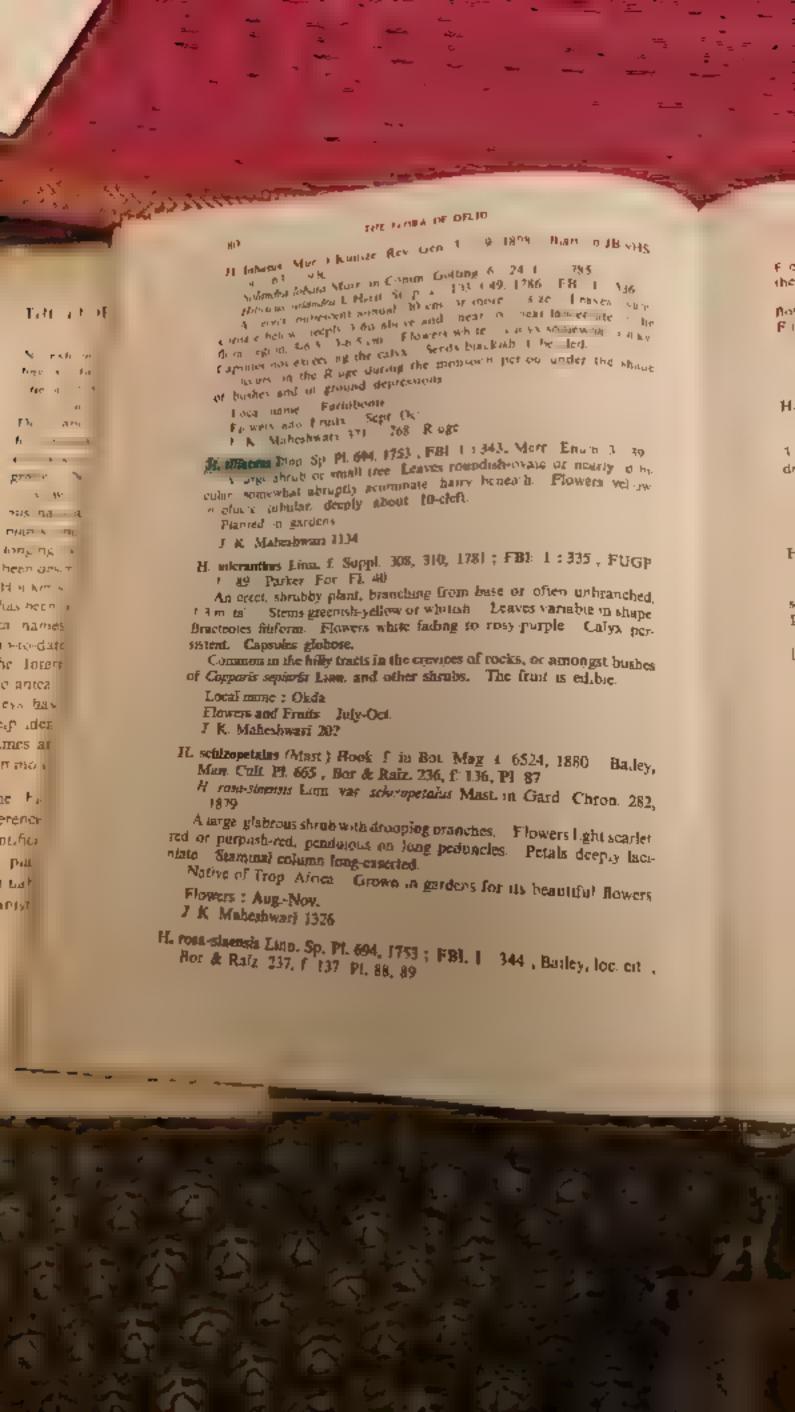


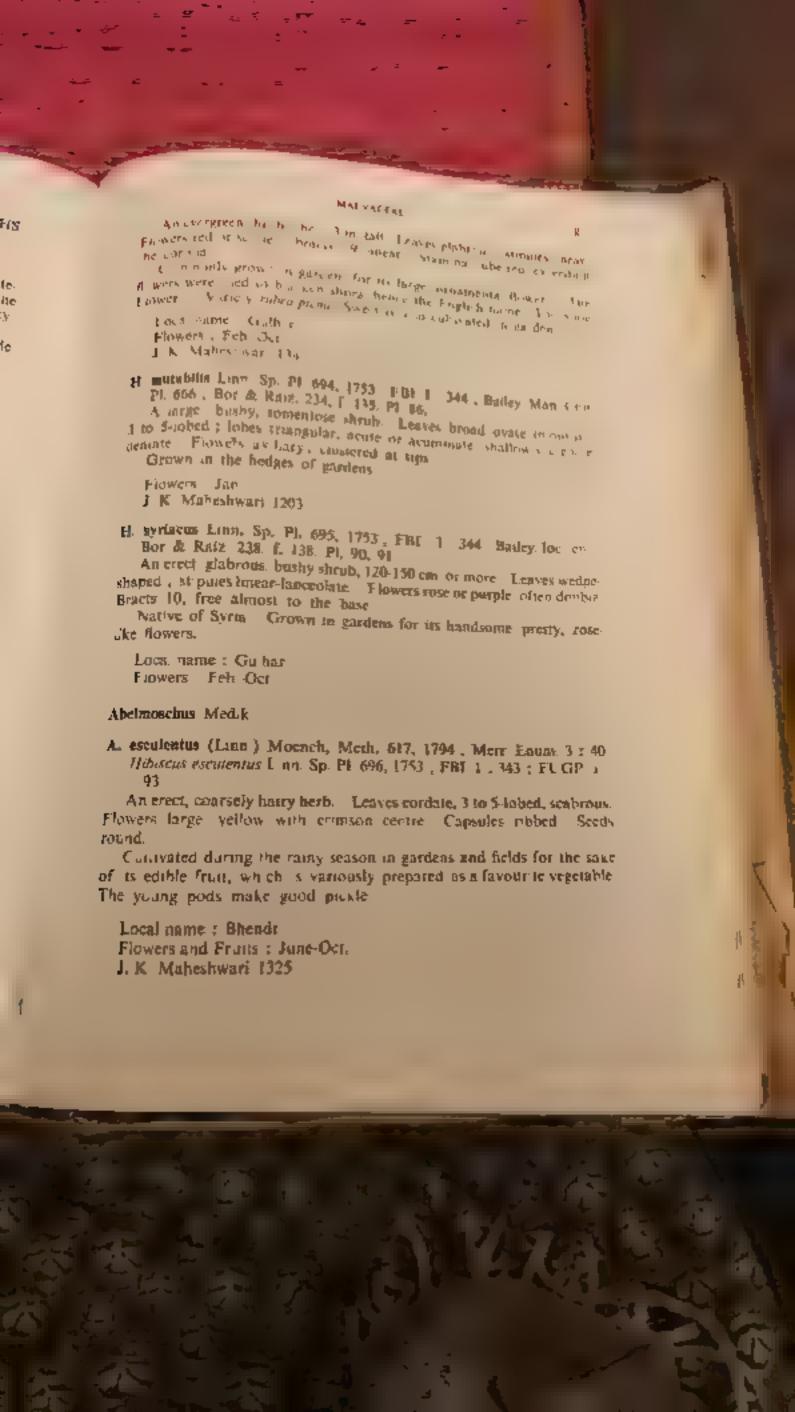
THE PROBA OF THE RE 75 Aanghi . Aphin Likat name however and little a Major pain of the year IIII + IOIJ. K. Mahe-hwart 74 4. Didentation thighs go A Right Level 3-1 Alliyer 1 68, 1847 To Parker and for 46 23 970 North the less out describes this plant as fairly common, but I have h s fa an collected are specimens invited I the a while As creet perennal. Leaves evidate mare downs on his historiaces Panieles ax dary. Ripe curpels 20 smooth, exceeding the early's lawns 4 4 8 8 8 Dot nod spreading. has no o As glattents (Cay.) (3: Don. Gen. Syst. 1 \* 504, 1831 1 her stee Side planes Onv. Ip. 1 8, (-11, 1791) Chattion ritalicum G. Don. Gen. Syst. 1 + 502, 1831 . FBI 1 327 Rah N Parker in Ind. For. 46 23, 1920. fort w Pa ker bic cit is the only authority who collected this plant from one Cas has and spot on he Delh Ridge. I have not seen it in the field Annual or suffratescent. Leaves mandish-cordate tomentose an P 4 18 37d both auriaces. Flowers large, prange. Fruits globose. Carpe's about meing 20, awniess, shorter than the calvaheep deser 4. ramosom Gpill & Perr. Fl. Seneg. Tent. 1 : 68, 1831 ; FBI. 1 4 PONES 5 Fight St Parker For FI 38. as been f A small shrub Branches downy with thin, spreading hairs. Leaves al rames) j ovate, condate, coenate-servate Flowers yellow. Rape carpels about 10 o-to-dani with spreading awas Rare e Interr Fruits Feb. tanscal J. K., Maheshwari 842, near Qutab ys hav Maira Lum p sder Flowers dark purple or walet, coralla 3 to 4-lines the length of the calyx nes ar य असुग Flowers white corolla scarcery songer than the cally M sylvestris FI M. sylvestris L.on. Sp. Pt. 689, 1753 FBJ 1 - 320 M purviflora enge An erect glabrous berb, Leaves orbicular-lobed, petioles as long or longer than the feaves. Flowers dark putple or violet, about 2.5 cm. eith e across, on pediceis shorter than the petiole. Petals no ched DIA. A spre weed in waste places. 181 Flowers and Fruits: Cold season. 121 J. K. Maheshwari 1424 M. parviflora Linn Amoen, Acad 3 416, 1787 FBI 1 321; FUGP

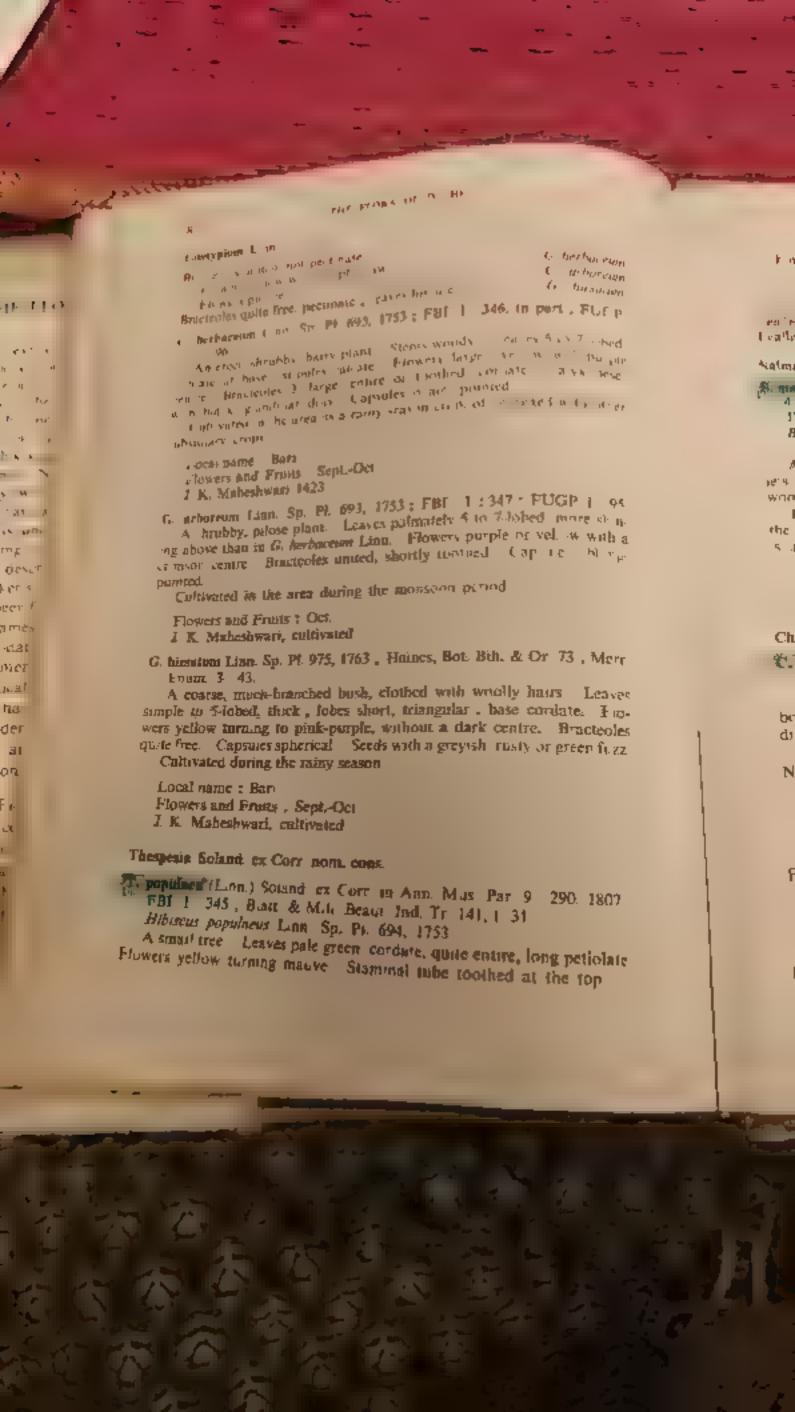


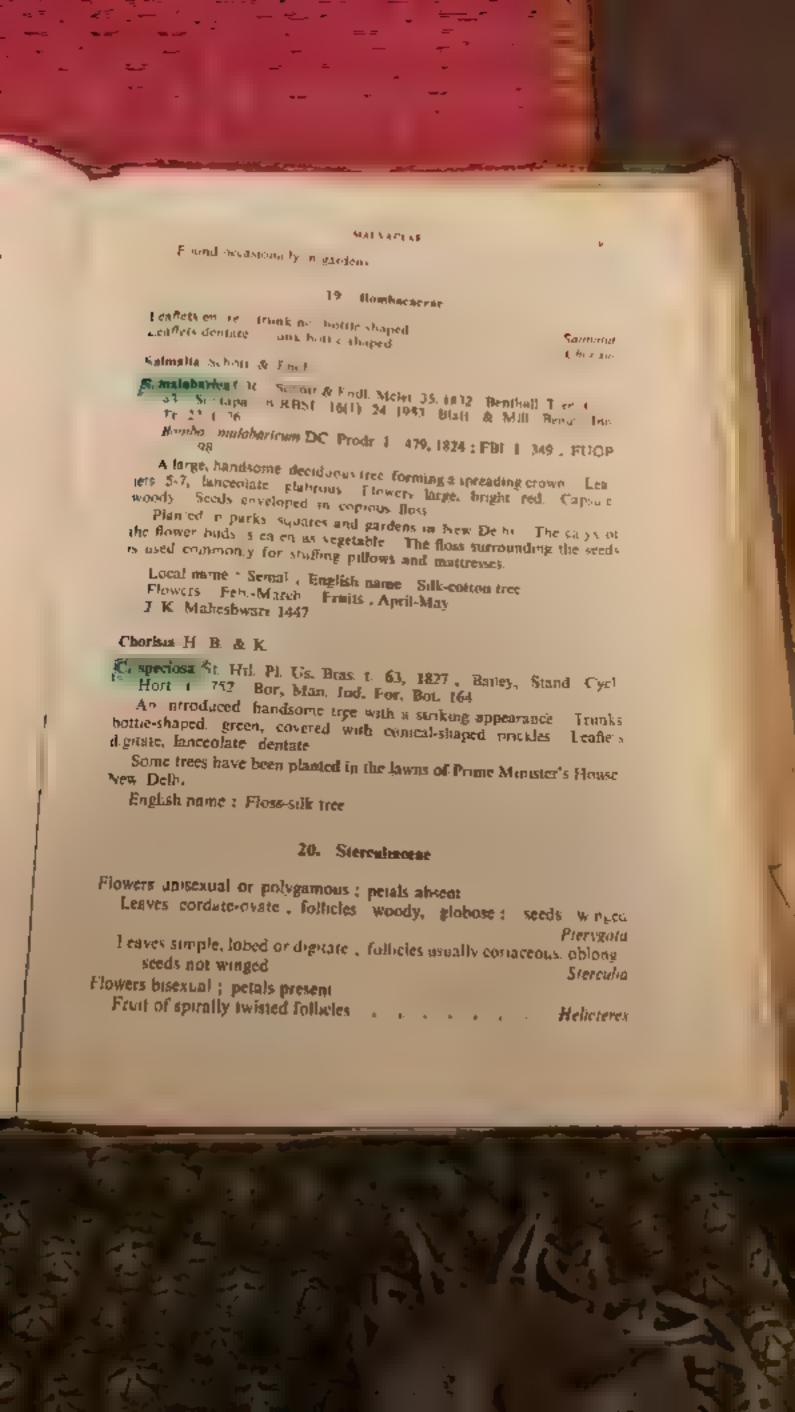


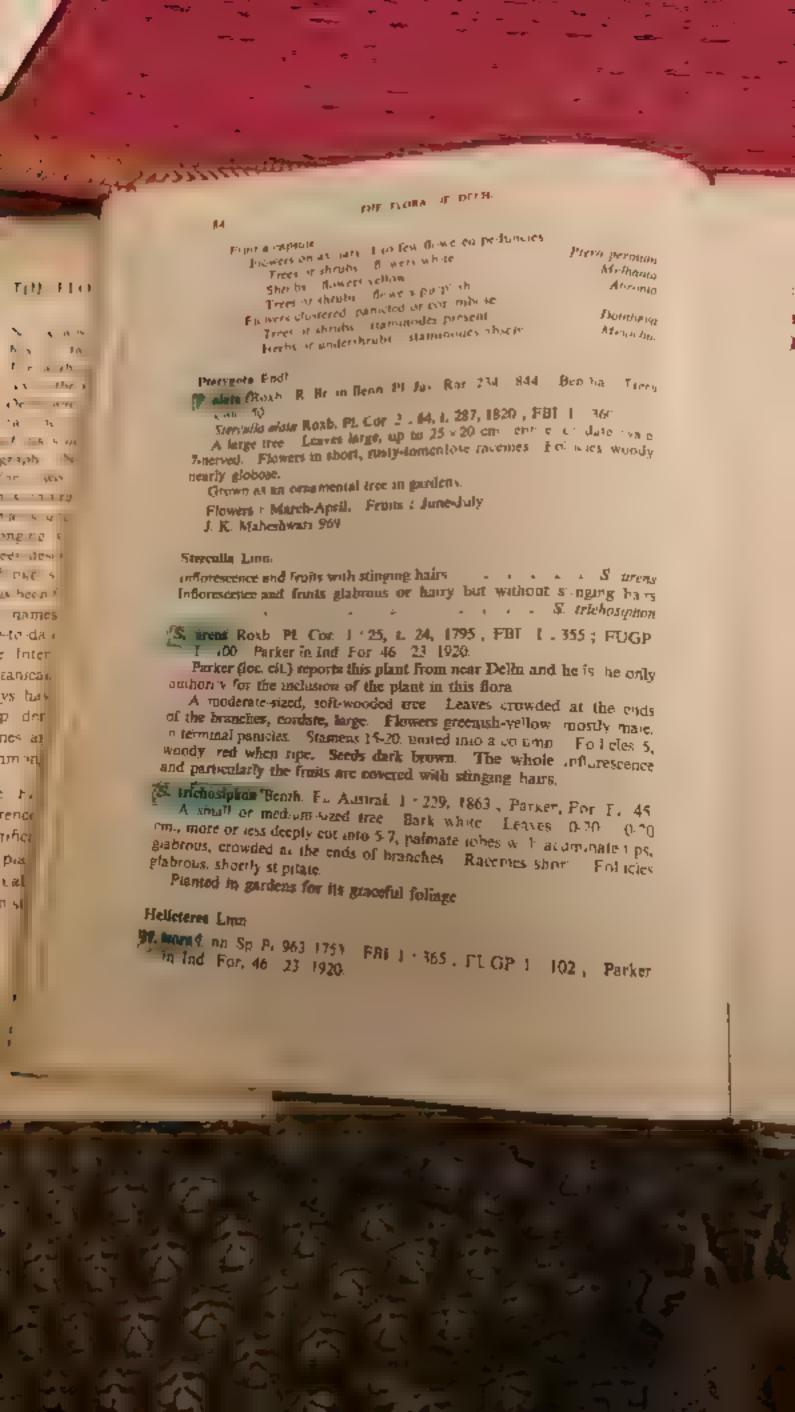


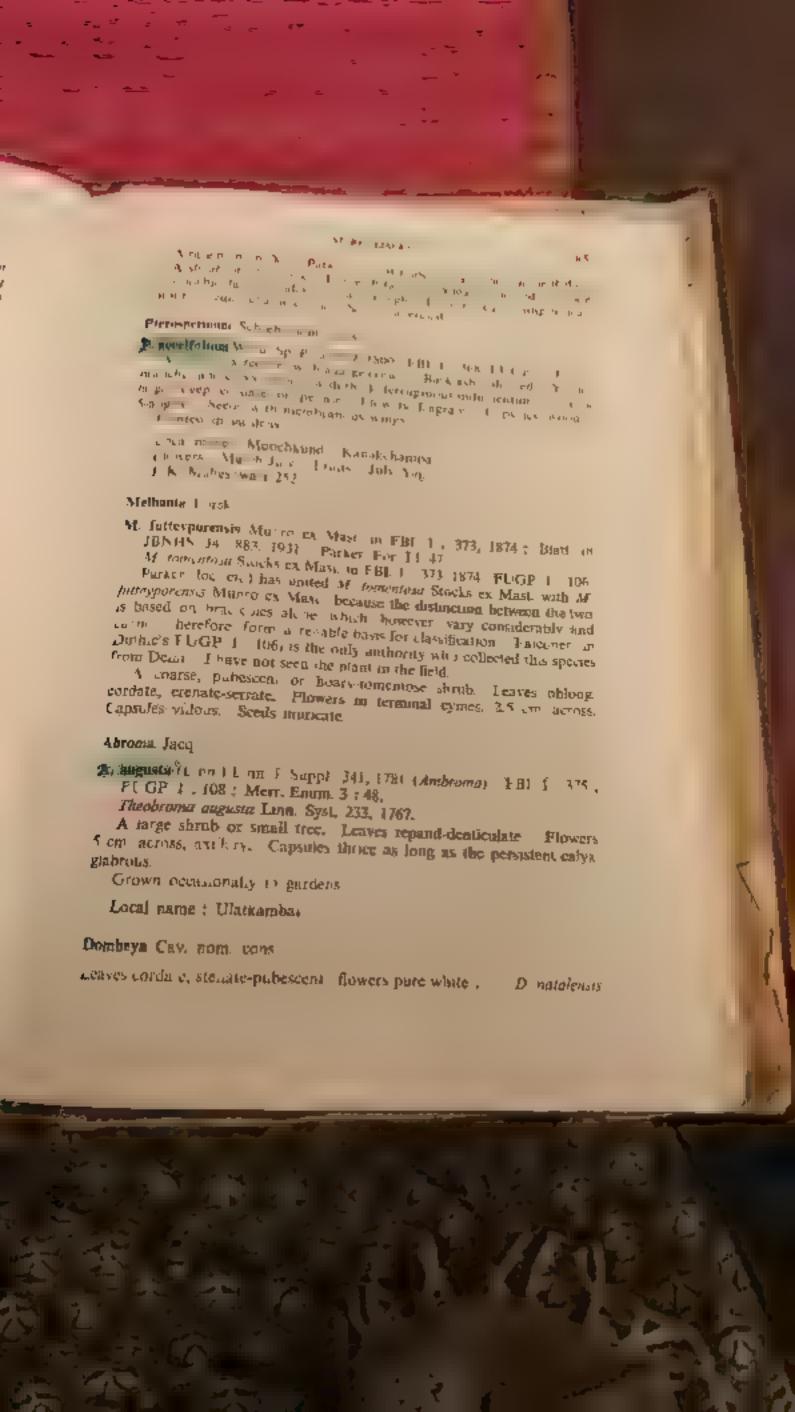


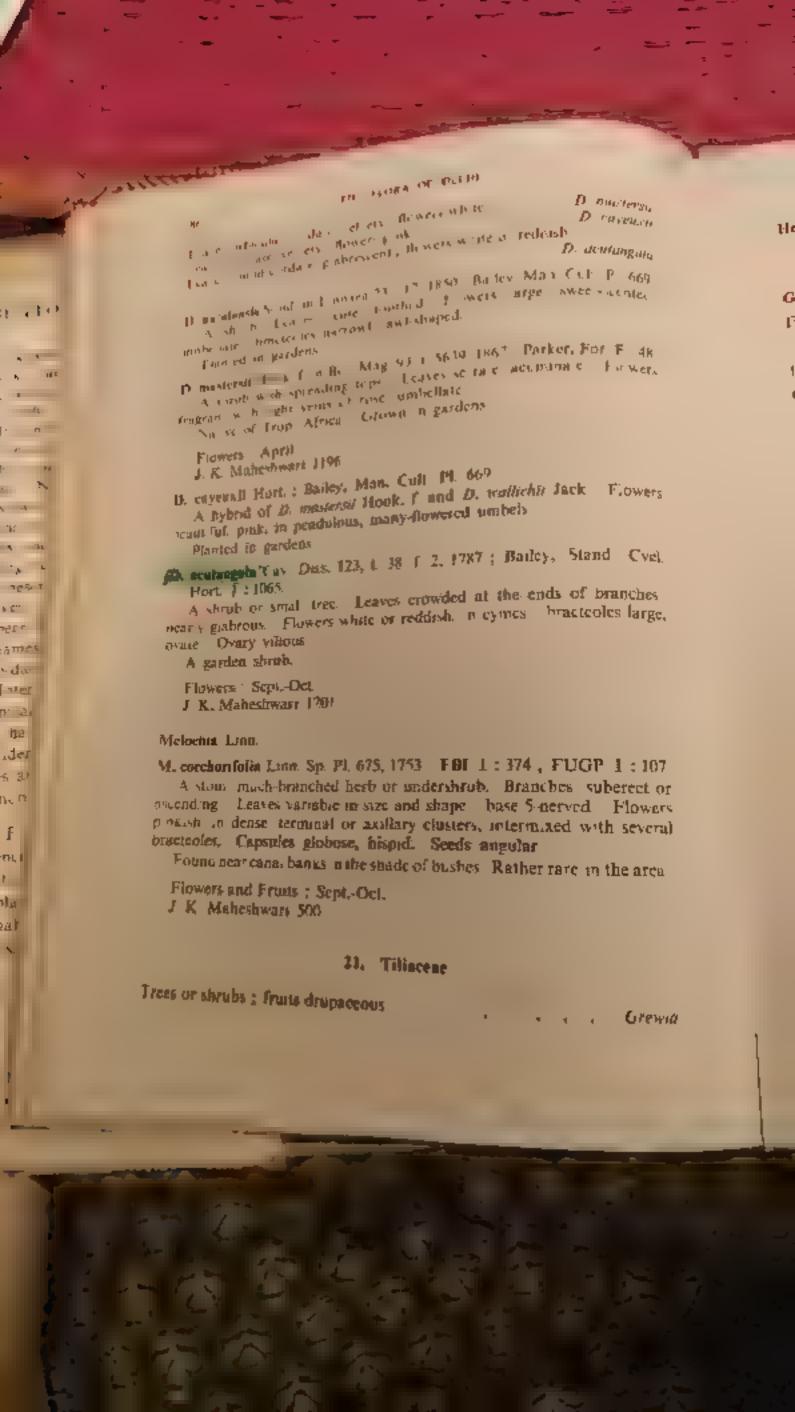


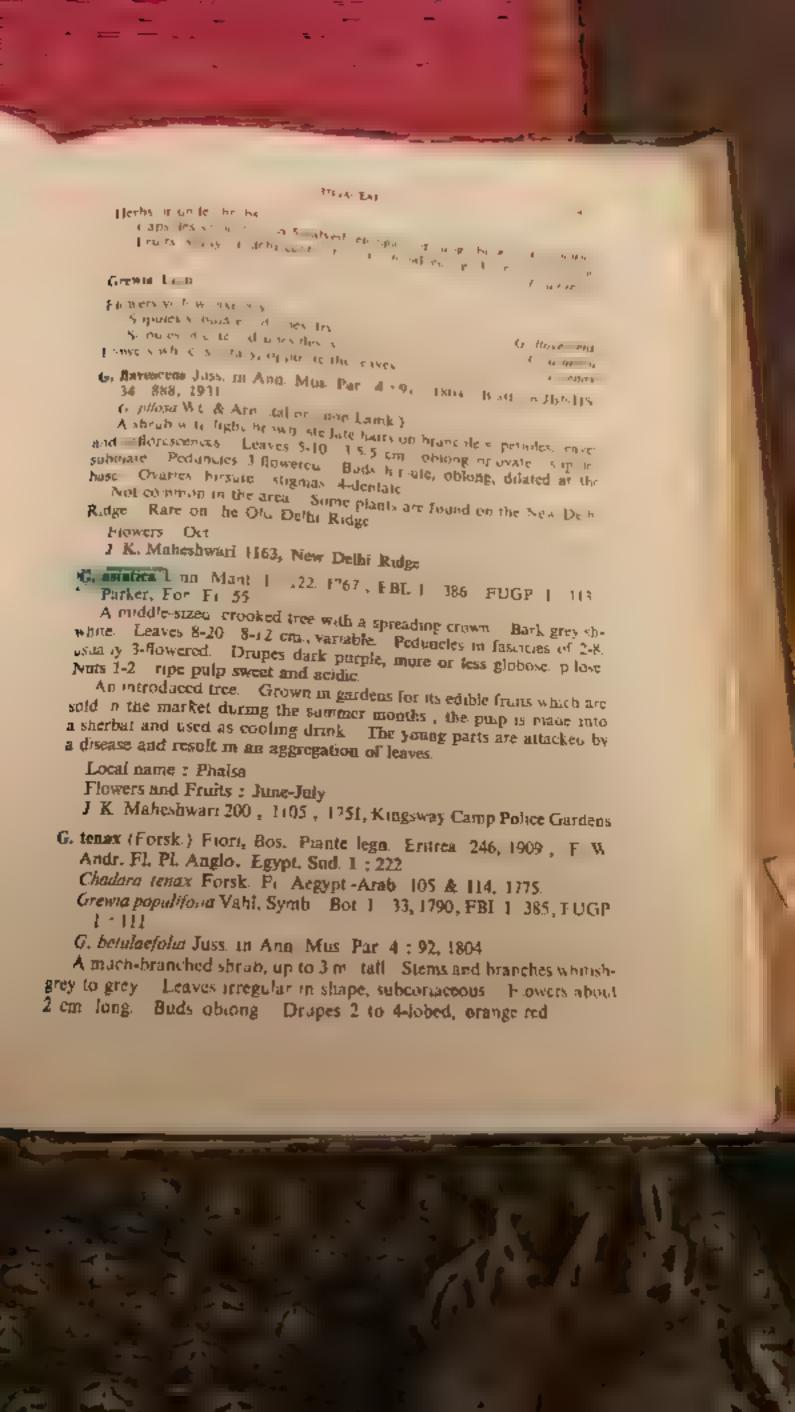


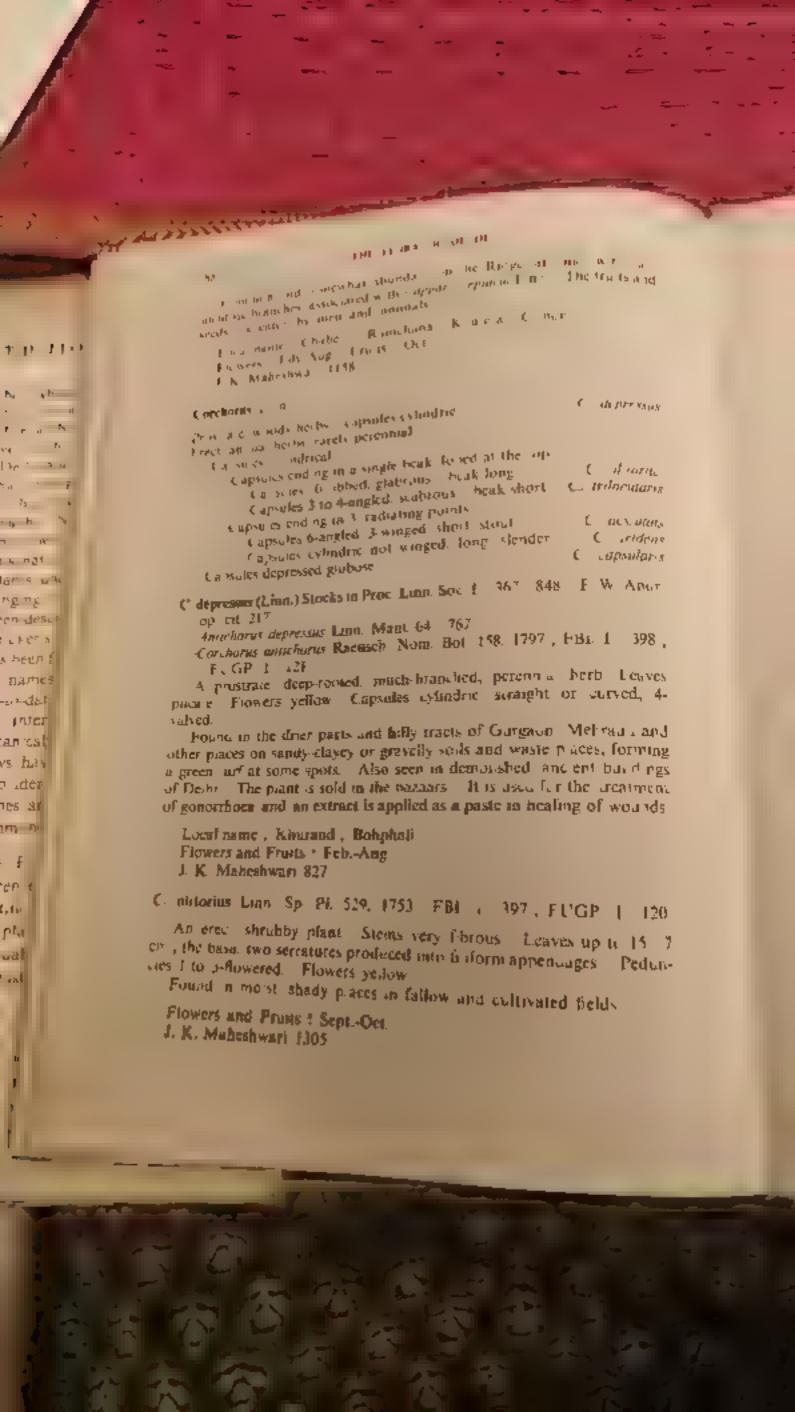


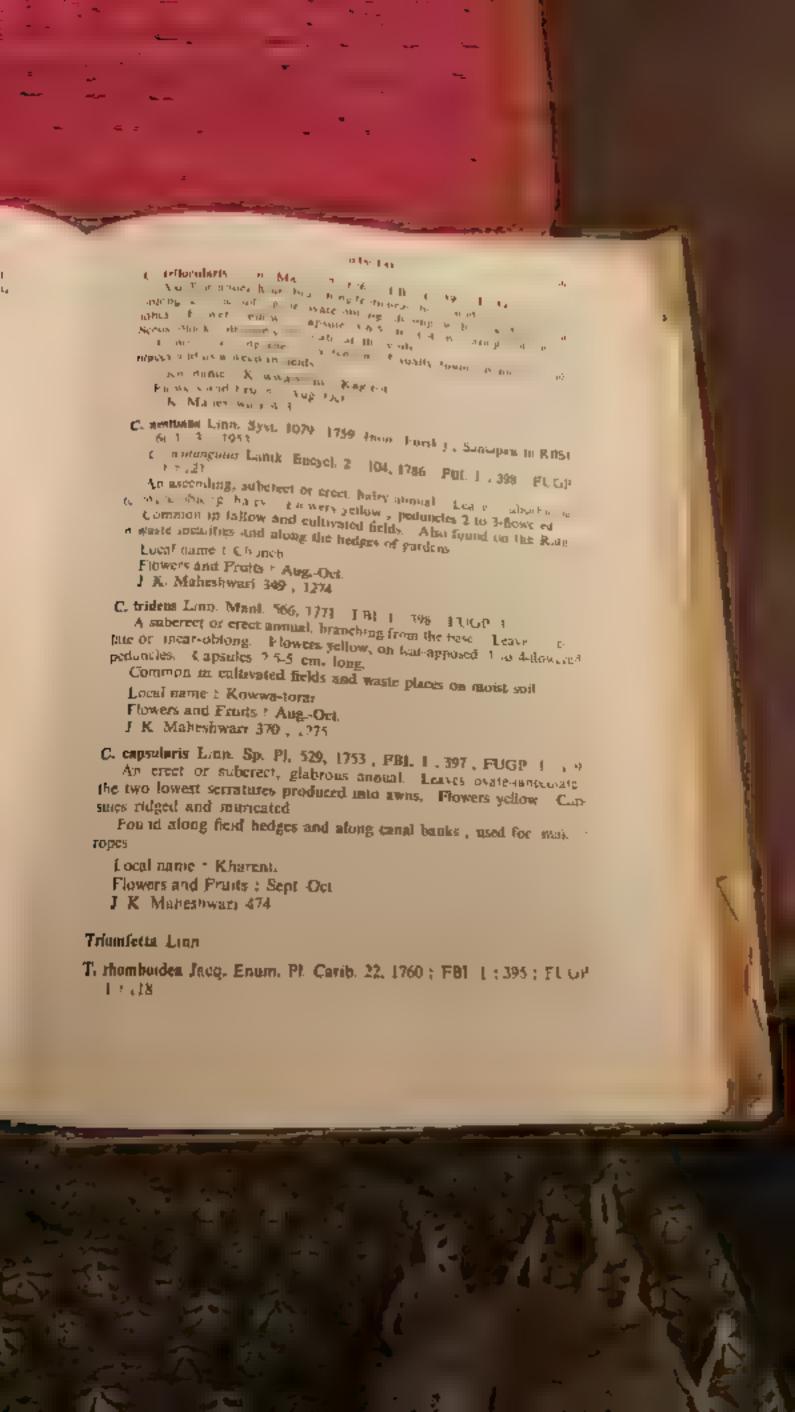


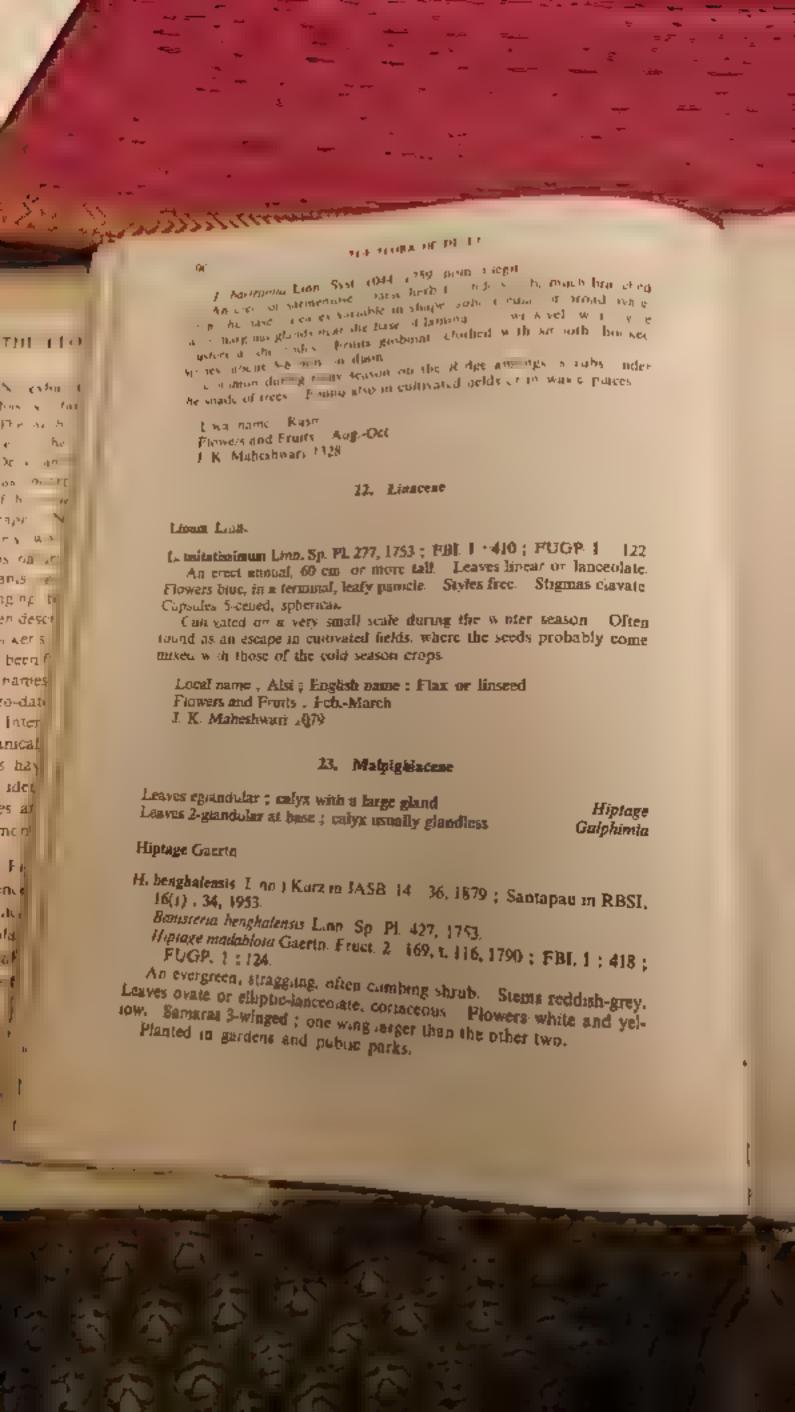


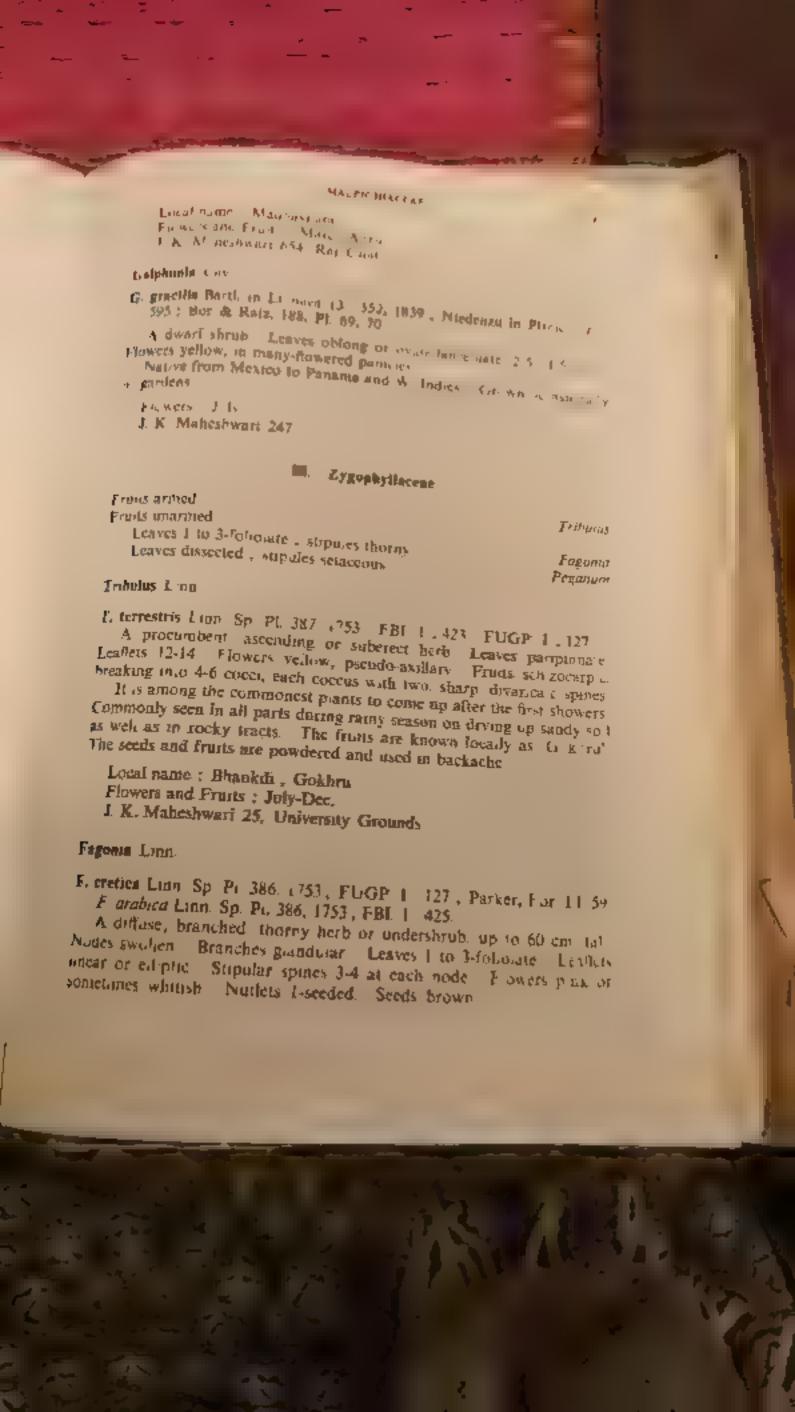


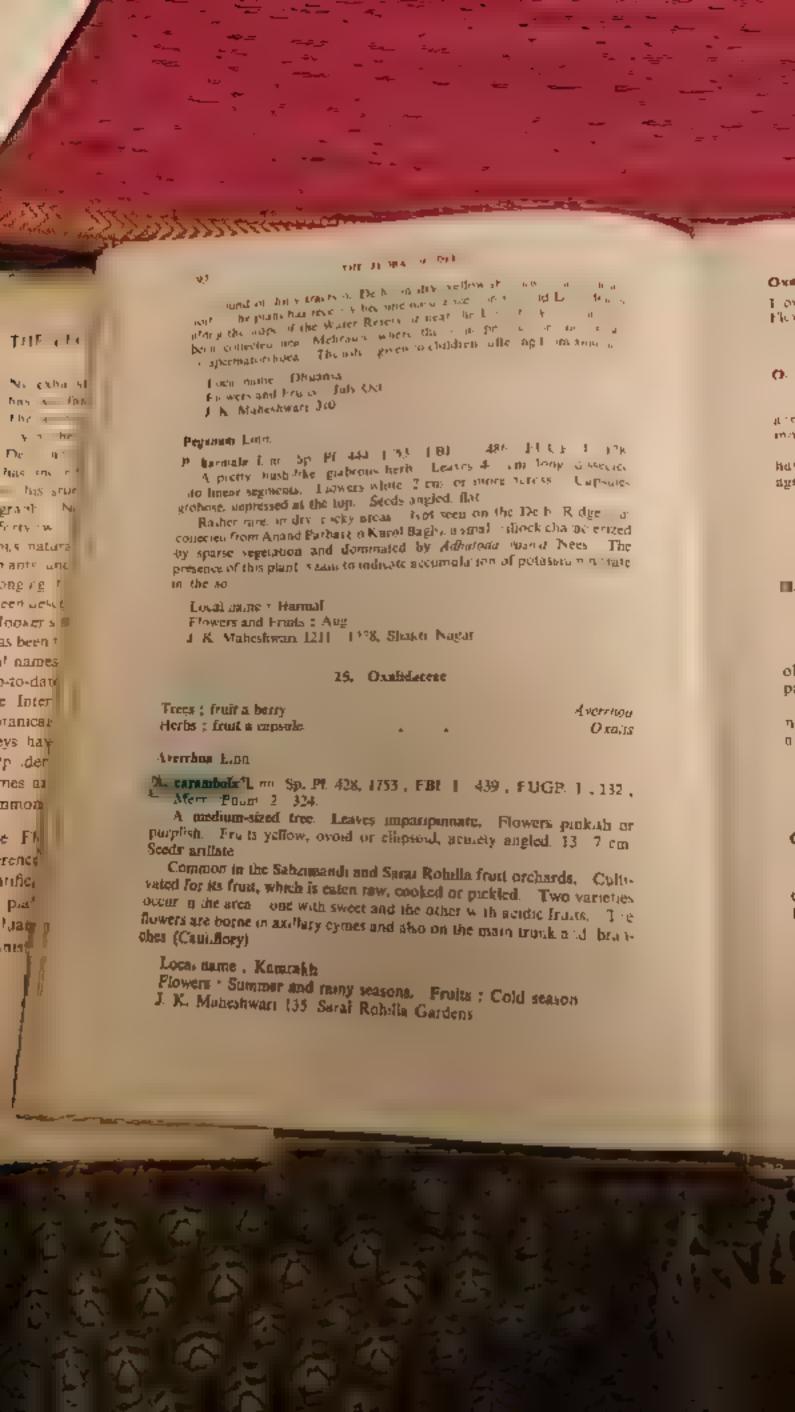


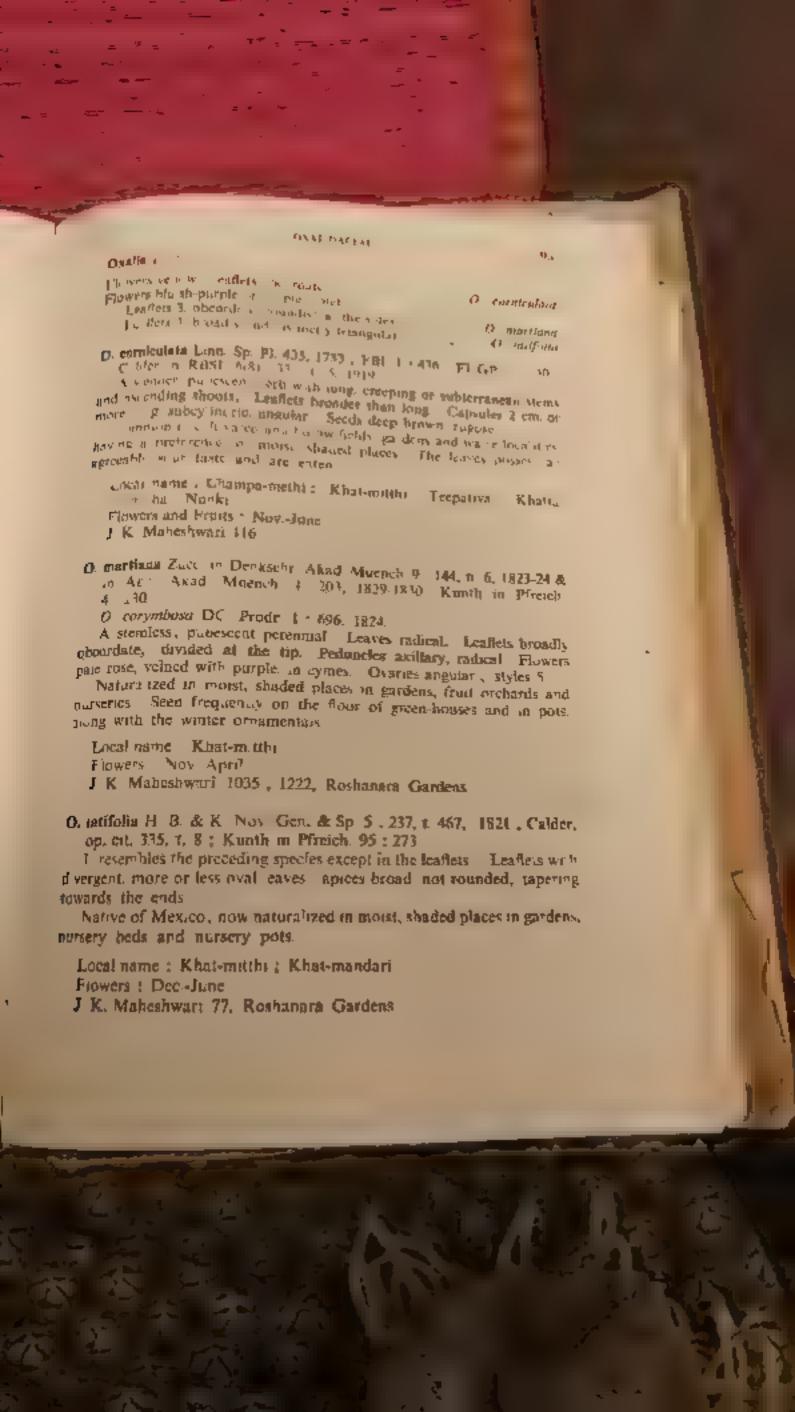


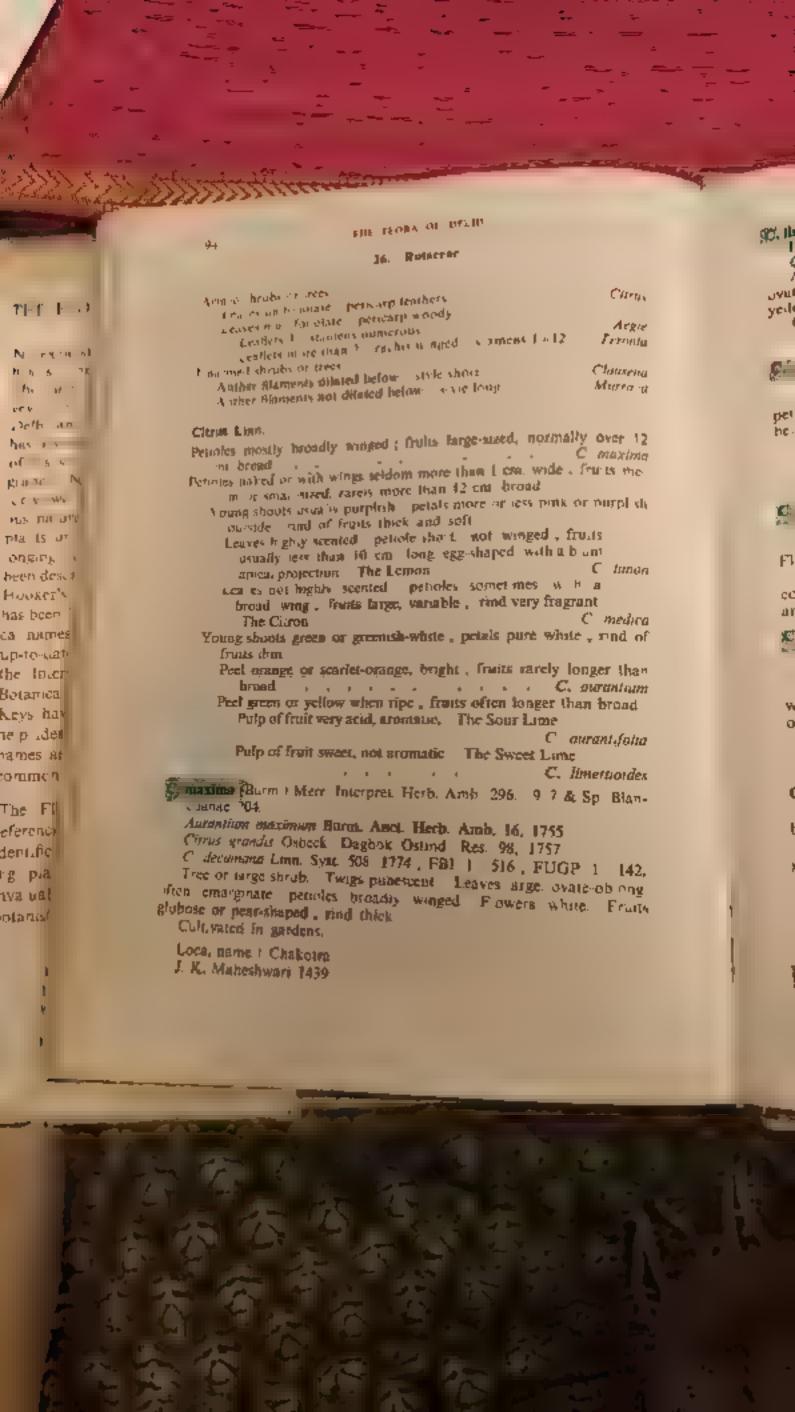




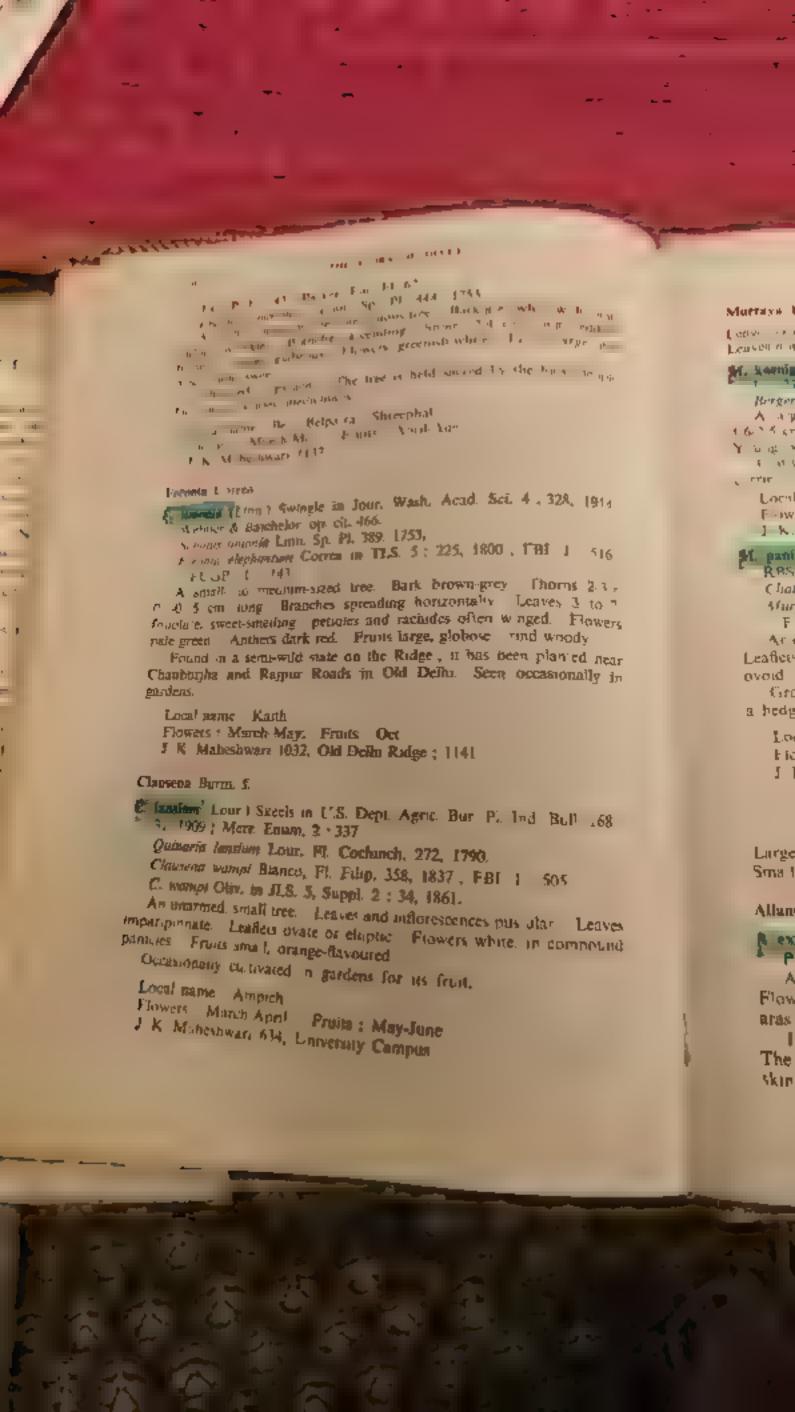


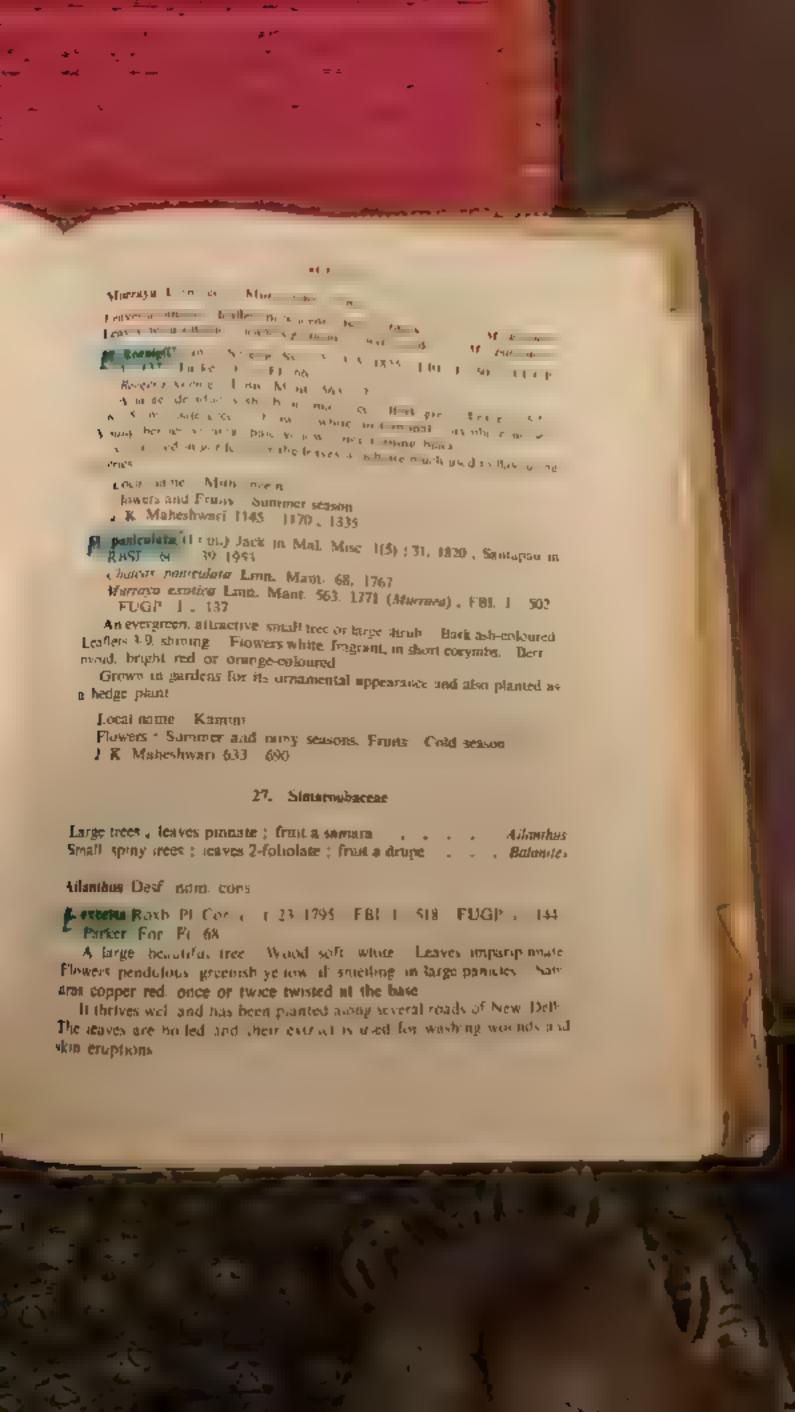


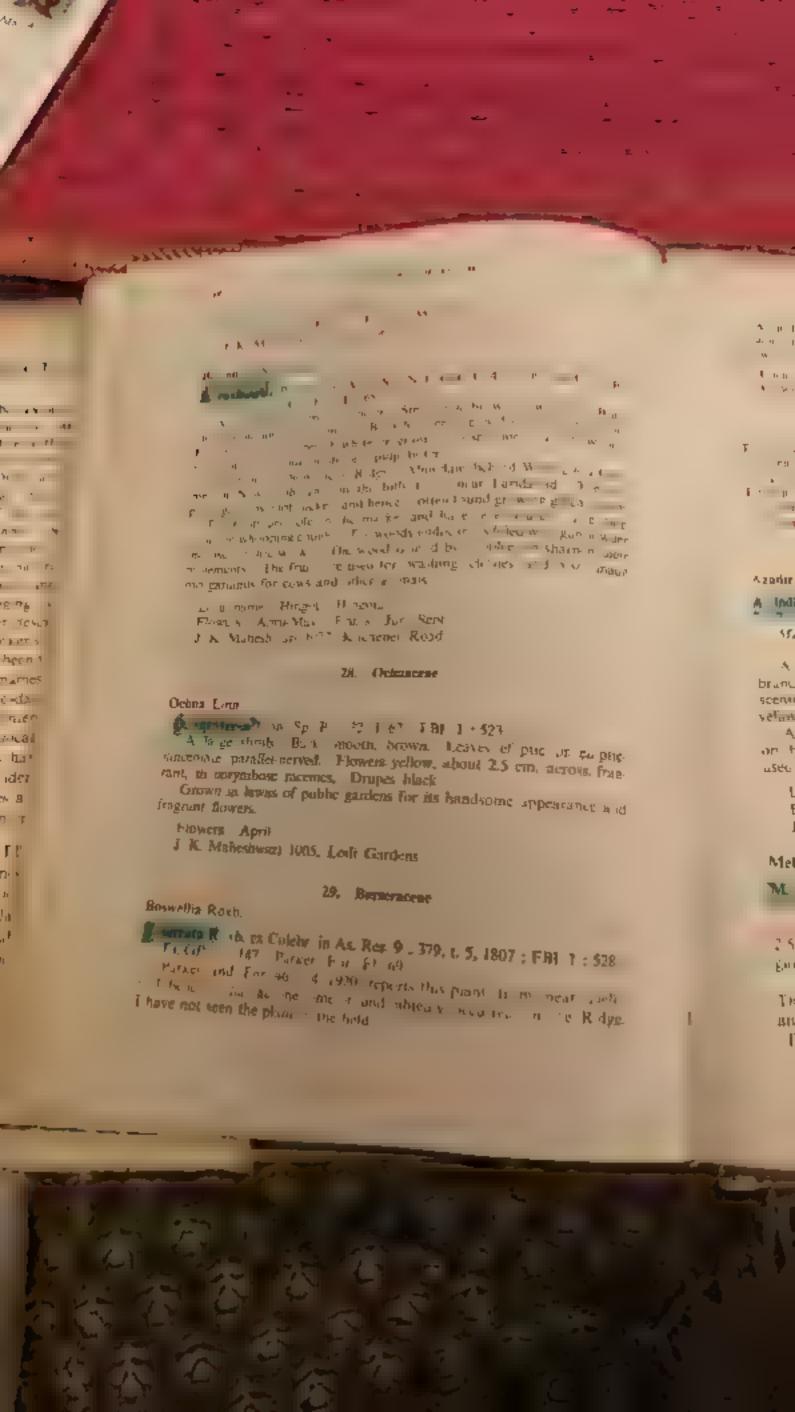


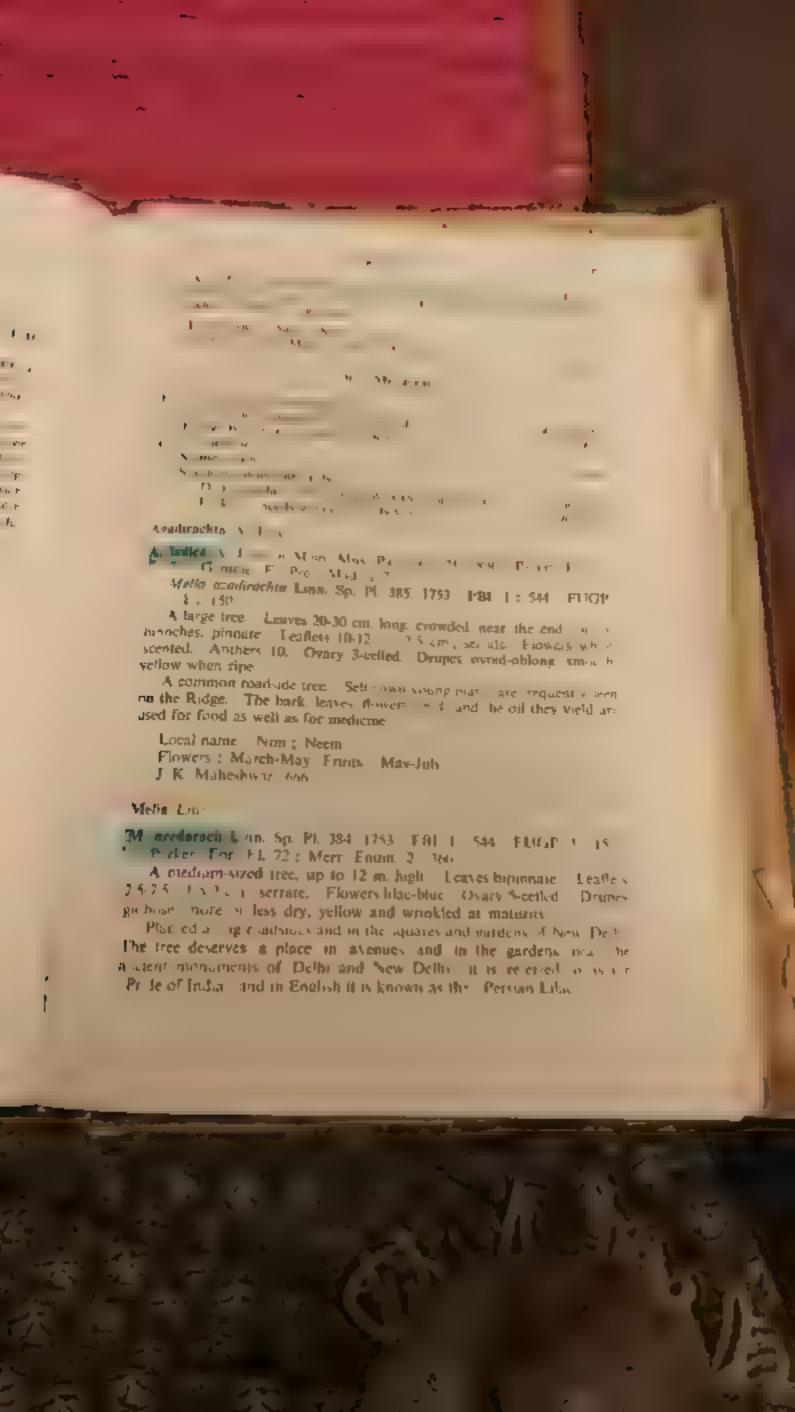


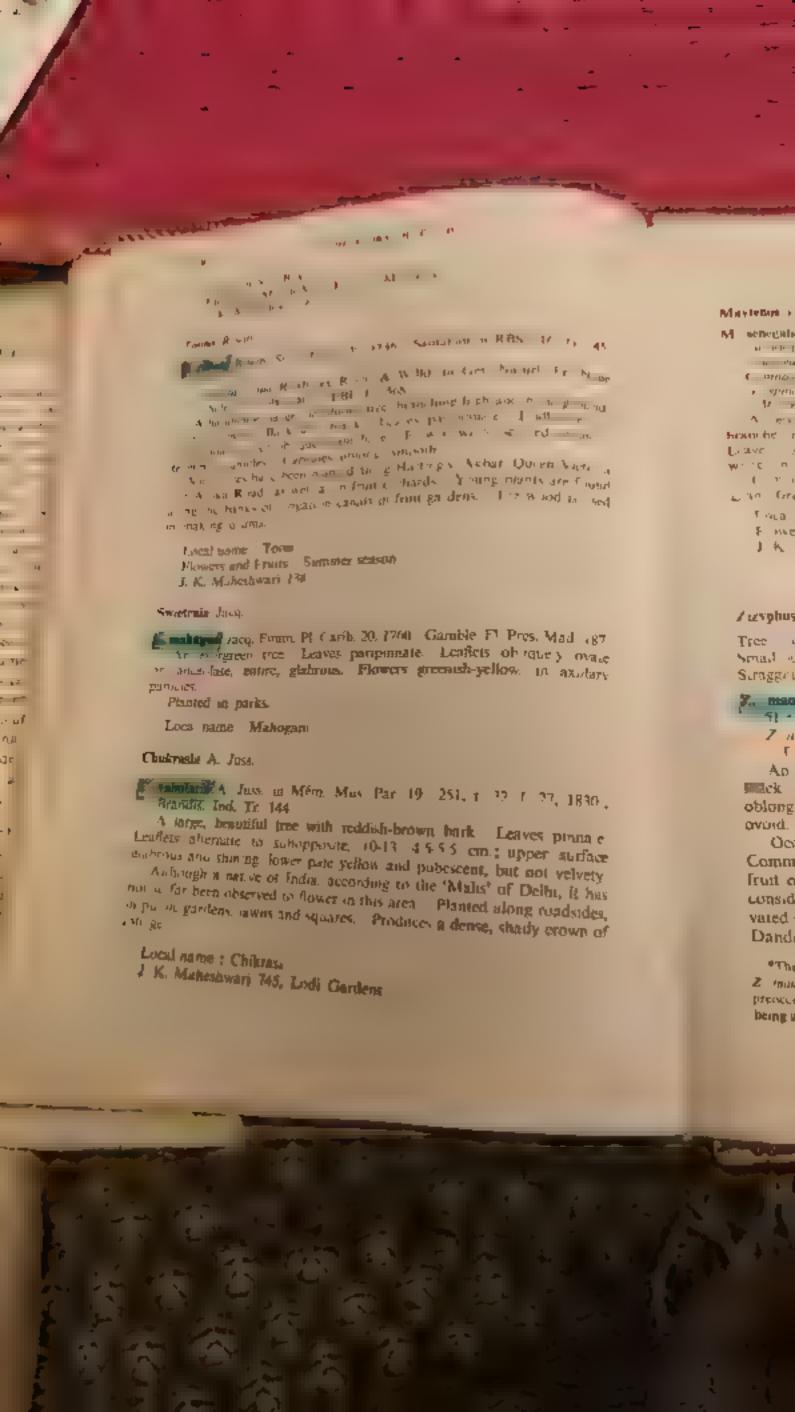
PUT IN BAR 198 198 Unrea ( I'l Ind 124 Class Writter & 16 E medica Luna, var. ismort Line, Sp. Pt. 2 - 712, 1743 A small, thorny tree. Young follows and flow a had no h avate pet ofce there enter is winged finite and the cod Cirrar gargery for its frinches Cu ivated Acrie Ceronia English name : Lemon C petter tinn Sp Pt 787 1751 Fill ) 54 131620 Webber & Balcheler op or 396. discona A shrub or small tree. Young pures glabin. Virtuality perioles naked or marginate. Plawers white above pint ish or the payer of the p below. Fruits large, oblong or obound vellow Cultivated rr 12 vima Boglish name Citron 110 Flowers and Fruits Greater part of the year C. segenthant Line. Sp. Pt. 783, 1751 PBC 1 S15 F1 GP Mash Porker For I 63 Webber & Batchelor p on 402 Shruh of and three Young shoots glubrous I tores ellipsic or eva-Flowers whole Proits globose, slightly flattened at ends Popular Ca twated in gardens and nursenes for its use a free. The race uon commonly grown in the district are (1) Santara (3 Kakni, 4) Maria ica 6. sursutifulia (Chrestm.) Swingle in Jour Wash, Acad Sci 3 465 of - 917 Webber & Batchefer, op cit. 401 Limon aurantifolia Christm. in Linn. Pflanzensyst. 1 518, 1777 Ħ A shrub or small tree. Leaves elliptic-obling or ovate perioles m winged. Plowers white. Fruits usually small, globese or avoid, yellow or green when ripe, smooth, rind than turbily attached, pulp acidic Cucusated. 9 Local name . Numbu . Kaghzi-mimbu C limettioldes Tonaka in JIBS, 16, 236, 1937 A shrub. Petioles winged. Flowers small pure white. From s globose or evoid, smooth thin skinned pale yellow, purp sweet Cultivated. It is much used as a stock on which to graft cooseskinned pranges. Local name: Mitha-nimbu (Mith of Lahore) Fruits: Summer and rainy seasons Aegle Corres nom. cons. marmelos (I nn.) Correa in TLS \$ 223 1800, FB) 1 5 6

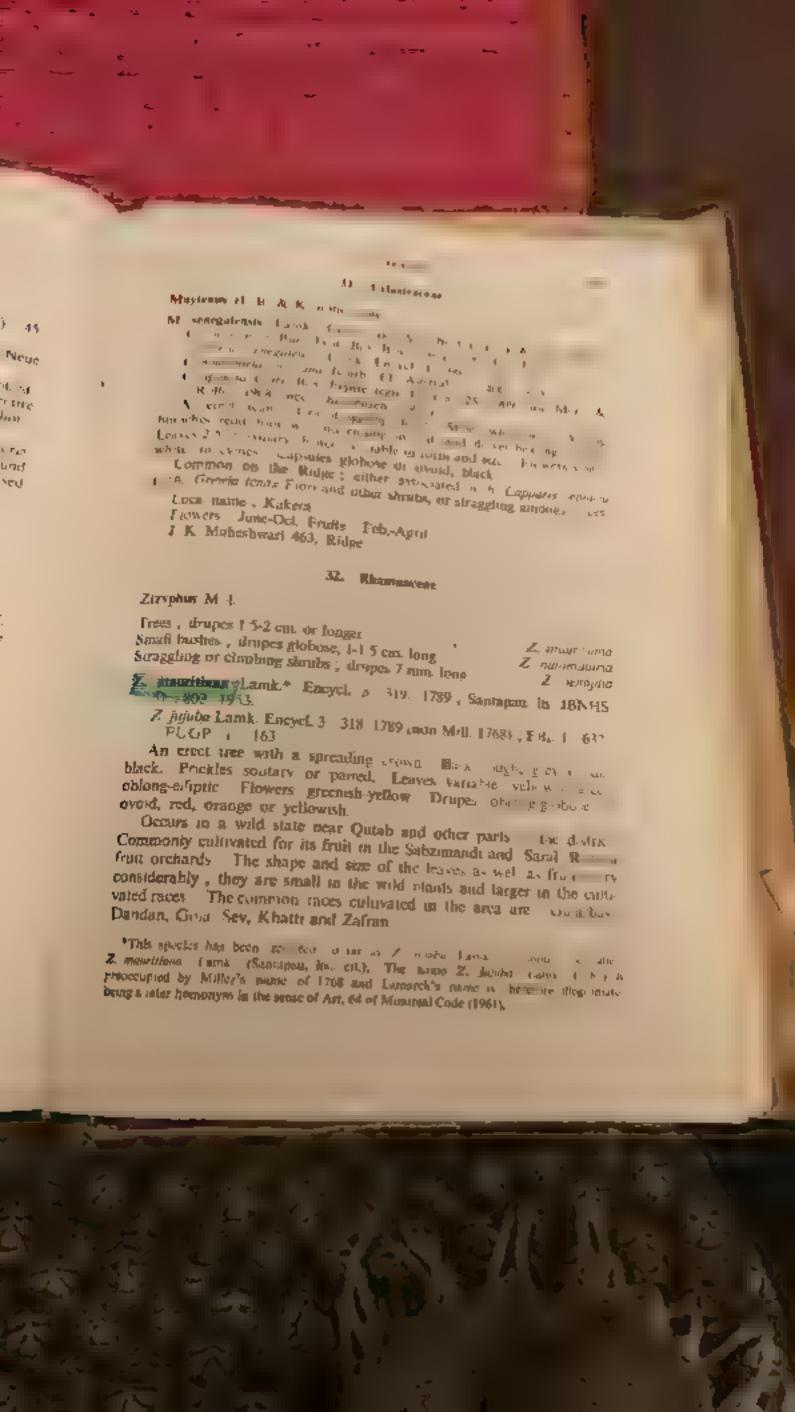


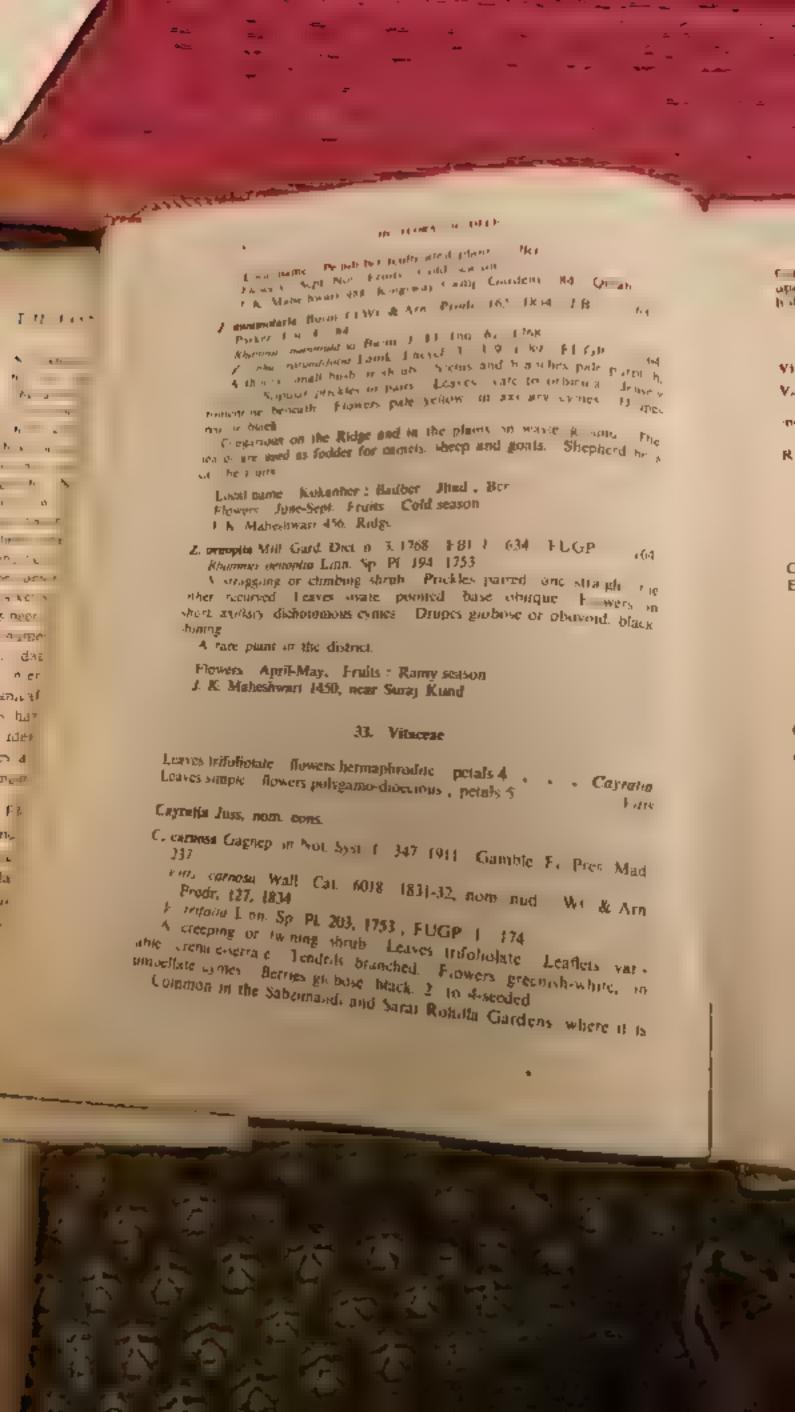




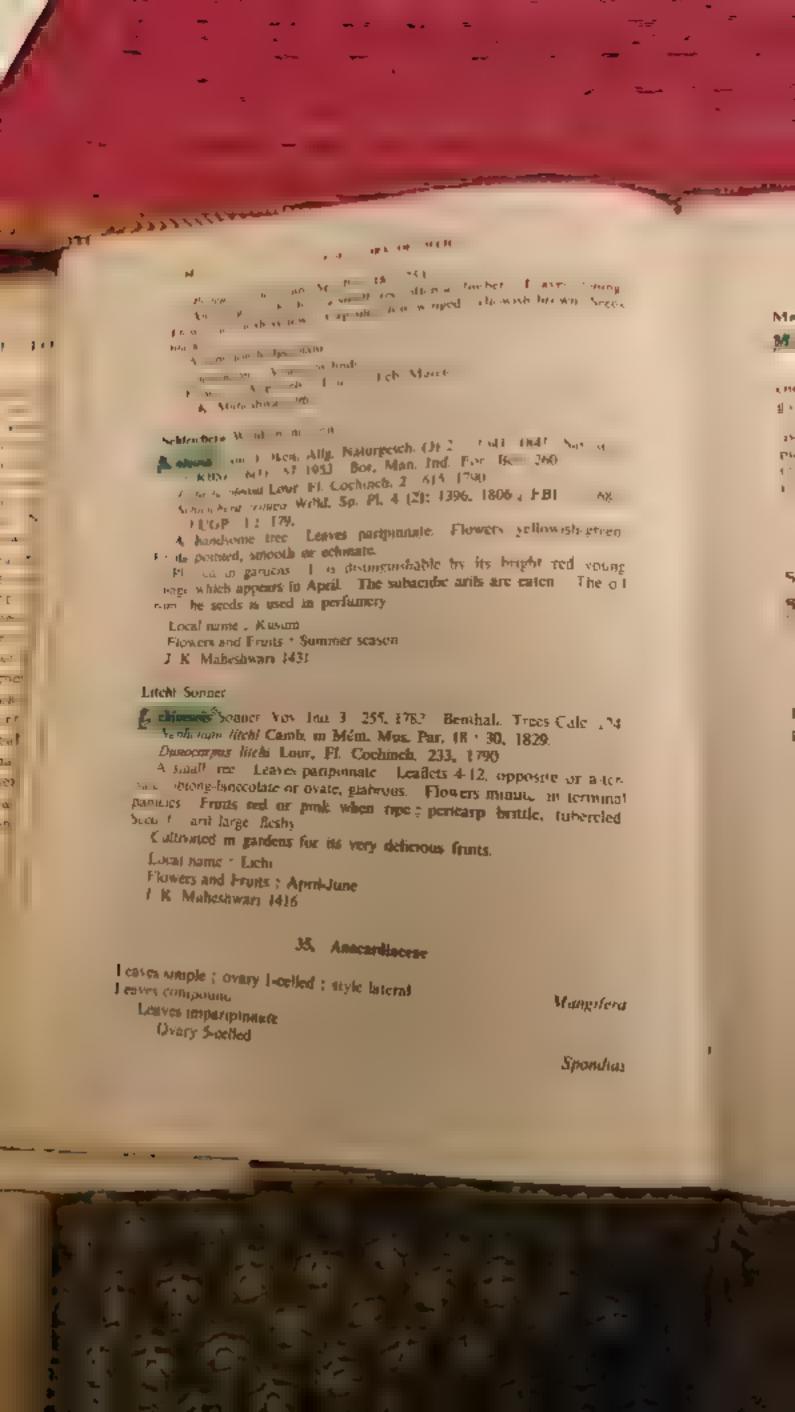


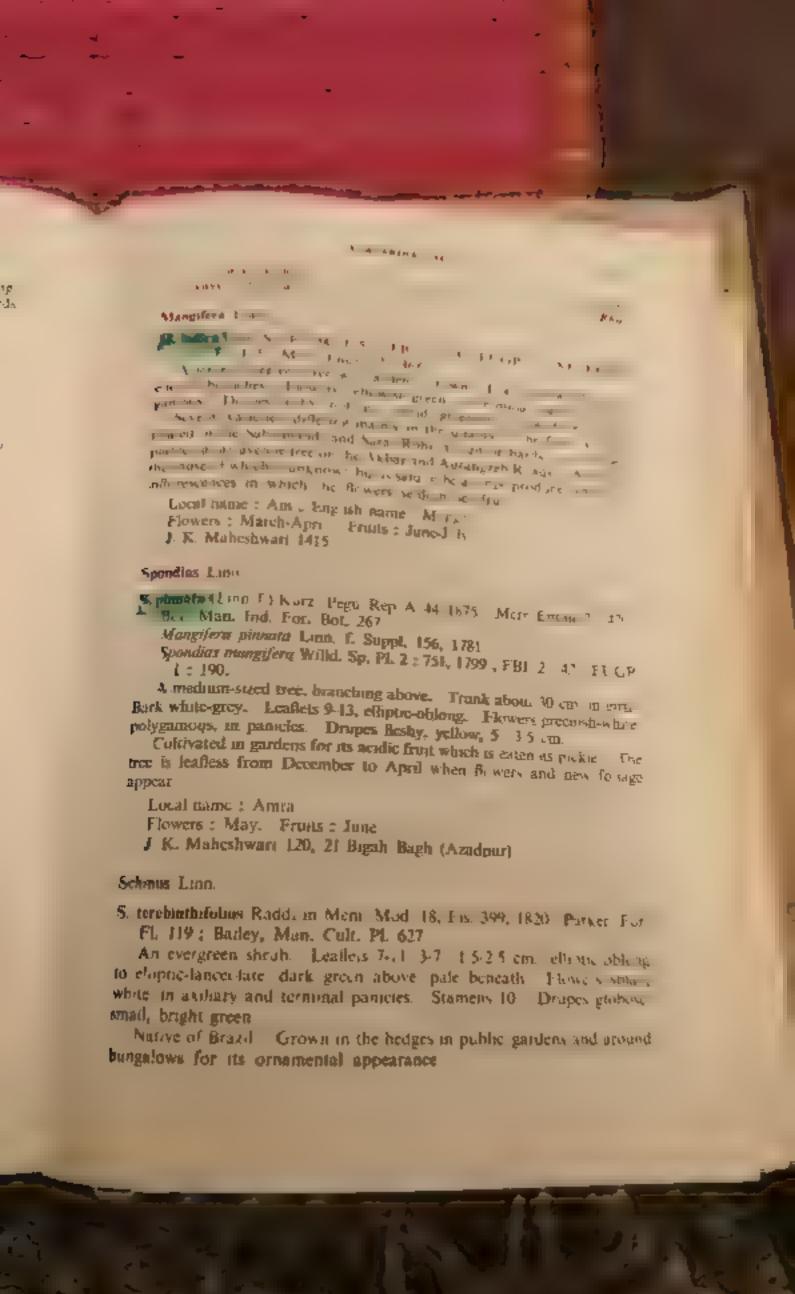


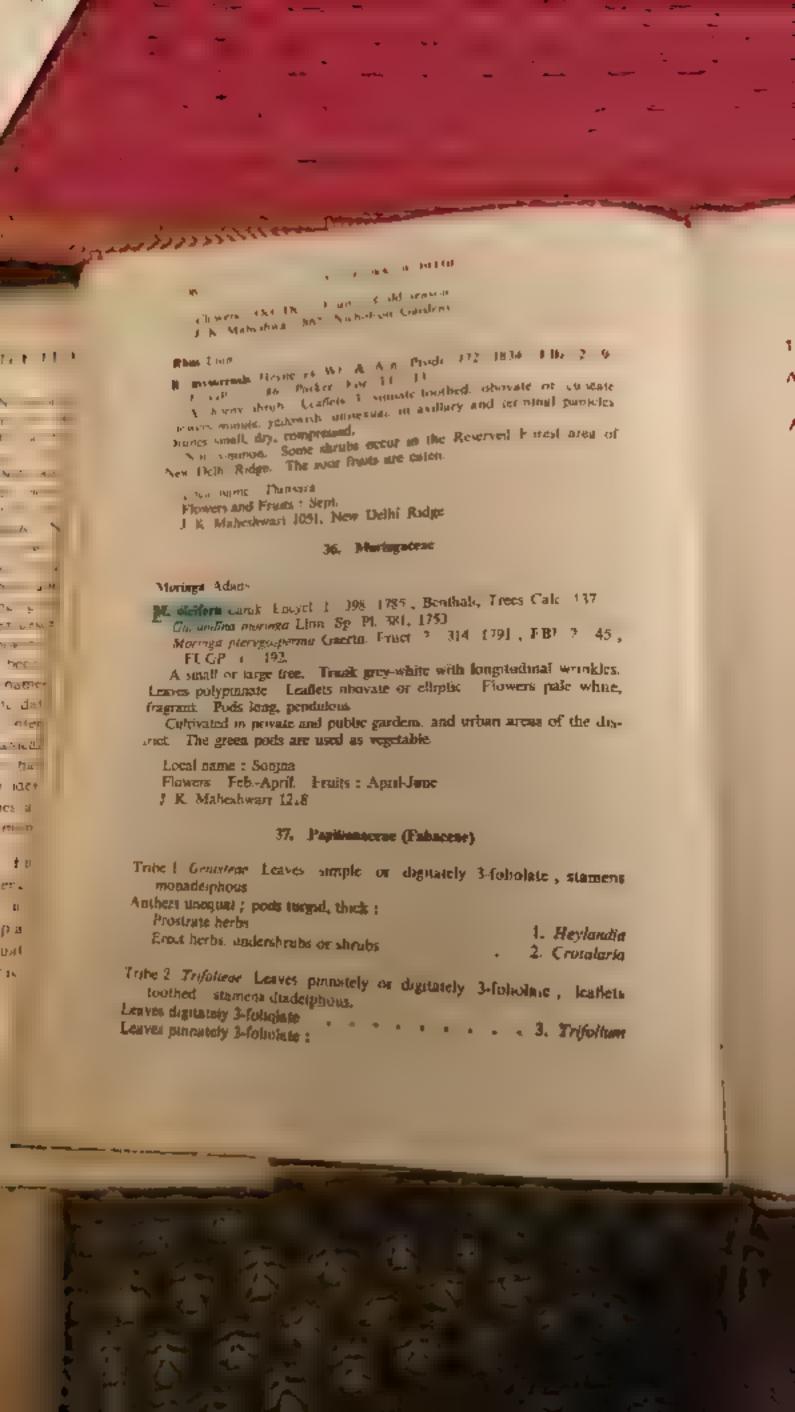


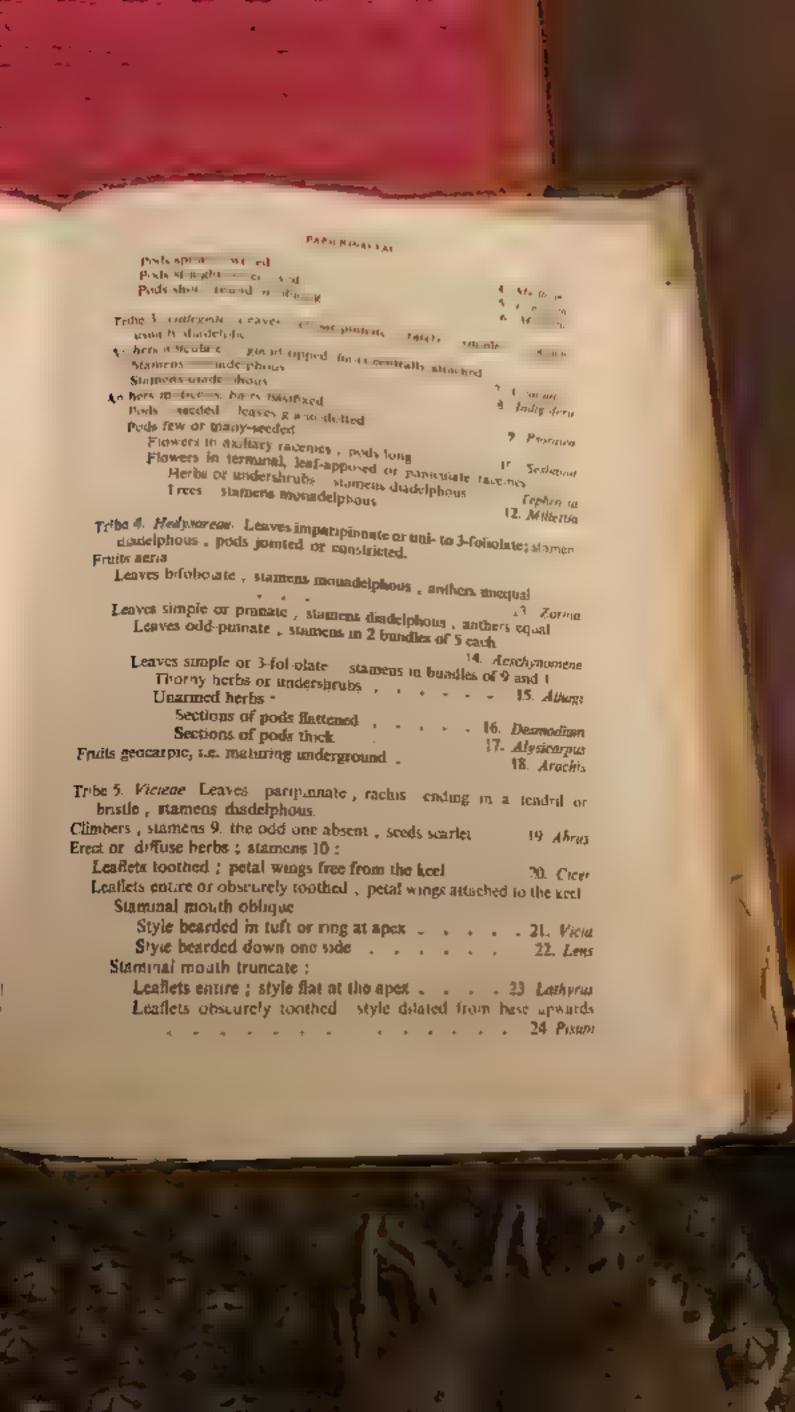


N 45 44 gound are war house the solution of the solution of the solutions appearable time of a fig. of the Rengion of the design to be a India to detail 611 I we Bo year \$ st. Rain and since we do. 104 Vich Line 3. Violent a 18, 56, 39, 562, 1-53, 1-68, 1-482, 4-0-69. A would desploy a b bold access to the action of the contract Place. tegrery (Accessorated) controlled to the fruit orchards of Sahr mands and Sale The Robilla Ser par Likachanic Angur Engish name Grape f K. Maheshwari 1619, Crutab Bagis Nurvery 34. Sapindacene 14 Chiphing herbs , flowers petalony Erect shrubs or trees . flowers apendous Eurdio permum Evergreen shrubs : leaves simple п Trees ; seaves compound . **Dodonaea** Calyx 4 to 6-lobed; owary glabrous fruits smooth or prickly Calyx nearly trancate or shallowly incubed, ovacy pube-cent often verrucose; fronts tabercled Cardiosperznum Lann C. hallestenbests Linn. Sp. Pt. 366, 1753 , FB1 1 670 Ft GP 1 178 Merr Enum. 2 493. An erect herb or clumbing by tendols. Leaves bipmoure Leaflers. pignately lobed. Flowers white Capsules trigonous, bladder ( s.e. winged at the three angles. Seeds black Con mon during the monsoon period on the Ridge and the neigbouring h by tracts, often clumbing on shrubs and trees or shady places or depressions. Flowers and Fruits! Aug.-Oct. J K. Maheshwari 276 Dodonnen Ling. D. viscosa (Linn.) Jacq. Enum. Pl. Carib. 19, 1760., FBI 1, 697.; FUGP. 1:182

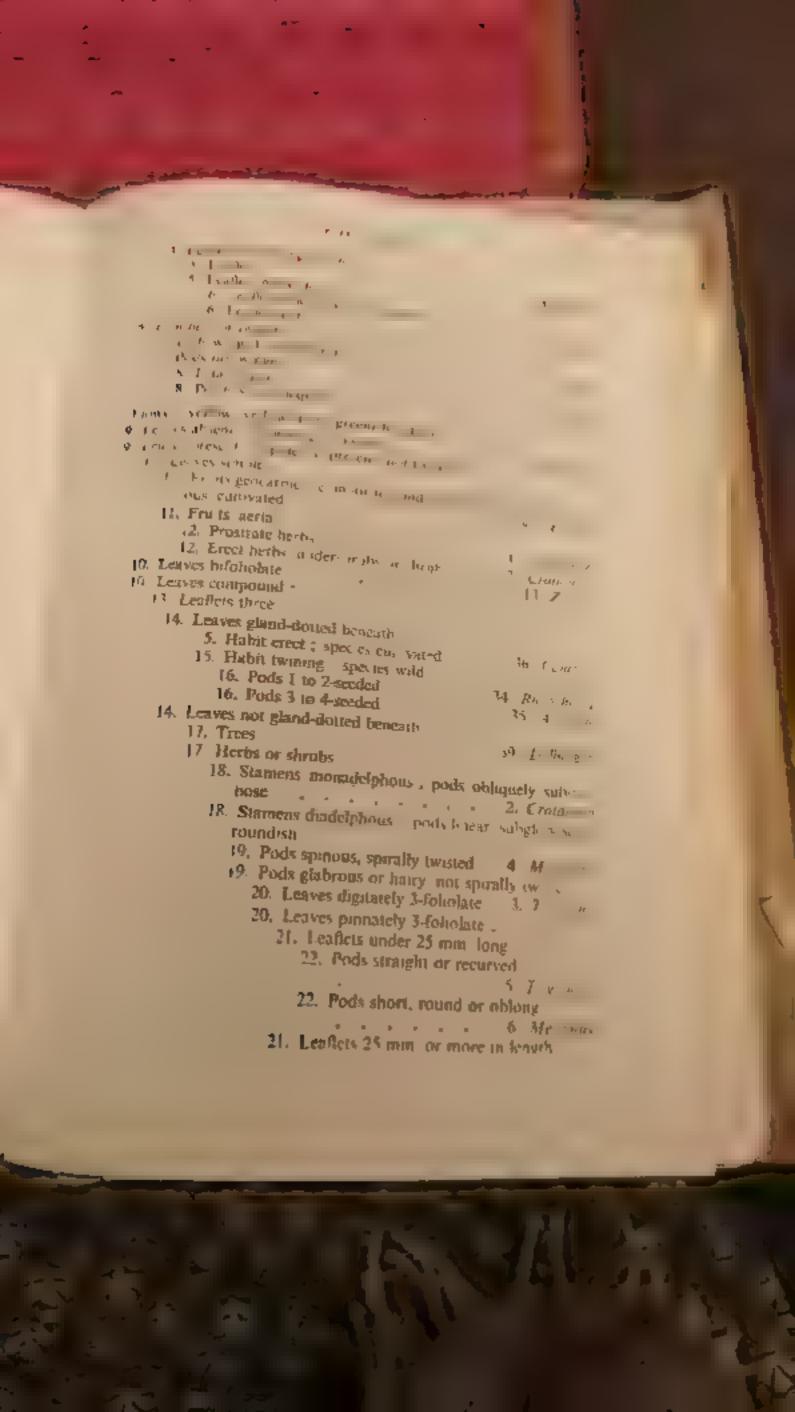


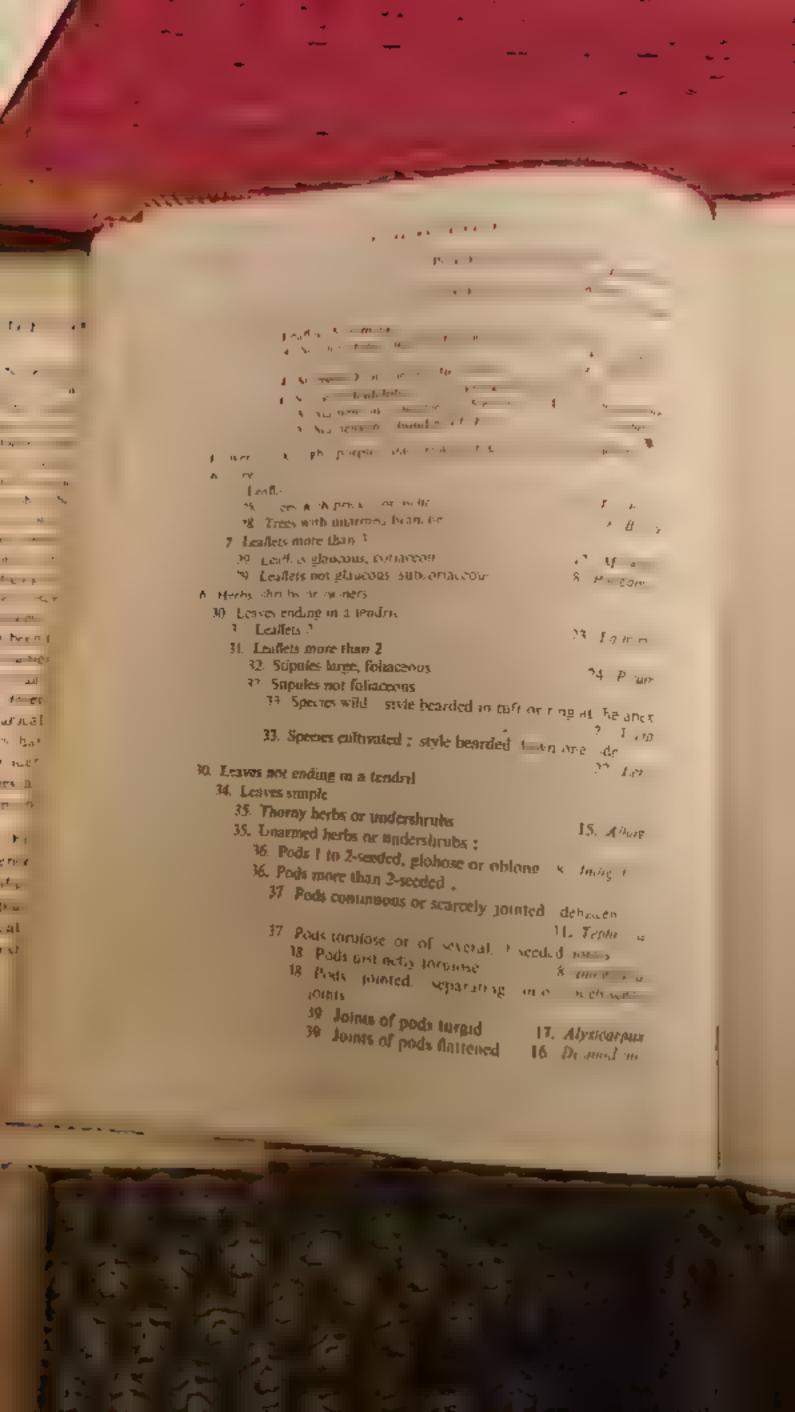


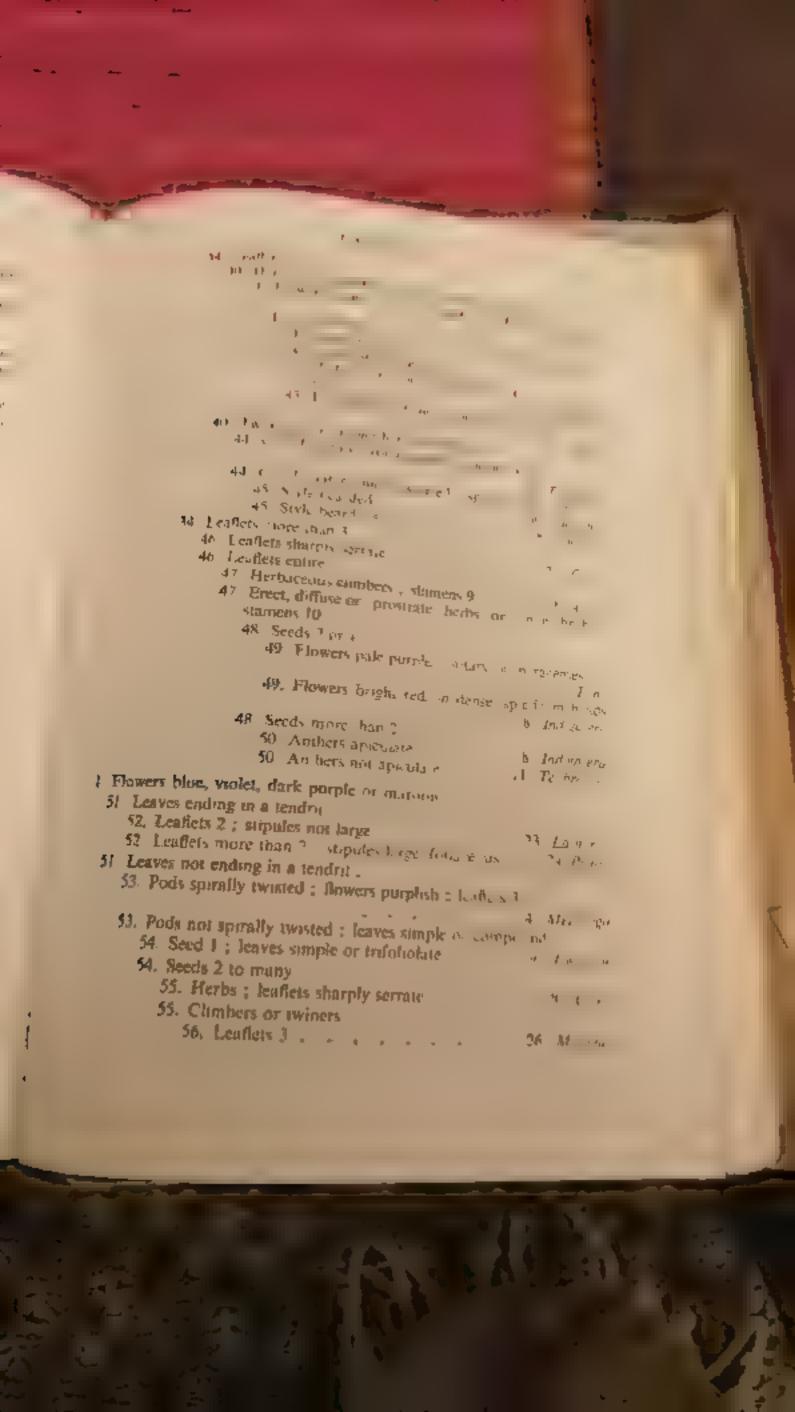


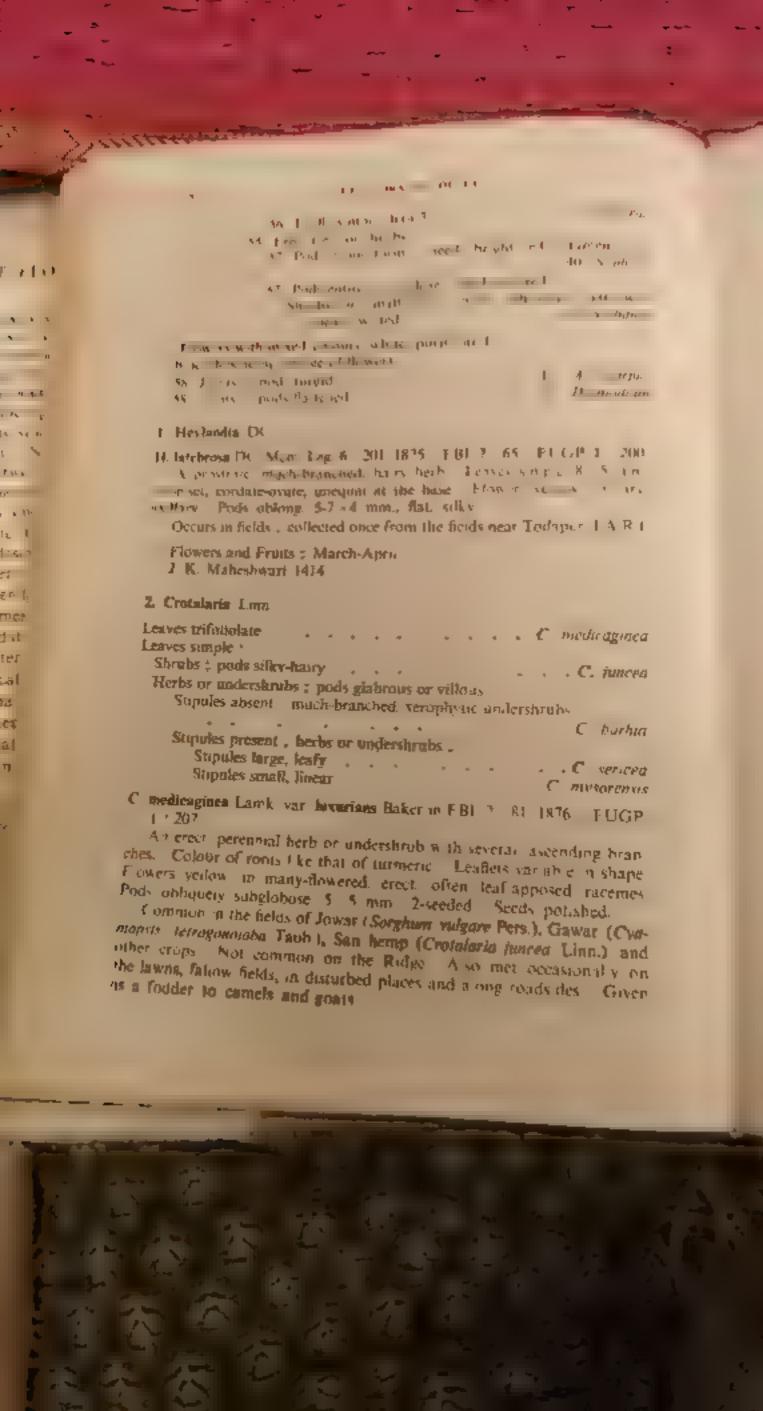


THE PERSON WE SECURE I be a more of ather on the property of leaves bearing The state of the s Note the state of and the contract of probability begins a palme 28 Purrama q hat at with the monade relative No Busen or a 4 Photo wine. Lasts not gland dot co. Stantons ande. this is to hear devi-Sign a ferri nati W. Dutt hos Peters equal 1) Chiforia Petals very unequal 1 19 South inhinger 32 Phosenhis Petal keci forming a spiral 33 Lygna Per il keel not spirally twisted Suc the 5 Contaming Leave gland-dotted beneath; leaflets exchapel-Lange Co. 1.6 ire is the beardless. 34. Rhymchosia 160 Pour at 2-seeded along silver on the relineated 2mc . 35. Atylosia Seeds arollate . . Sec. 1 Seals non-unitate . 36. Cajamis DICT بله ۲ Inde 7 Dalbergiese Leaves imparipinnate; staments mono- or disadiphous - pods continuous Leaffets apposite: 327 Climbers ' pads winged 37 Derris h 4 Trees , pods not winged 38. Ропуапна r 9 Leaflets a ternate. 39. Dalbergia 1 Imbe #. Sophurese. Leaves impariprimate; stamens free 20.0 Pods monational - - - - . . 40. Sophora t c Tie tolk wing artificial key is provided to facilitate quick determination Pat. of the genera-15 f Flowers white or whitish 1,1 2 Herbs 3. Leaves ending in a tendril: 4. Supules arge, foliaceous, suricled 4. S) pules trull non foraccous, semi-sugitate. 24. Pistun 21. Victo

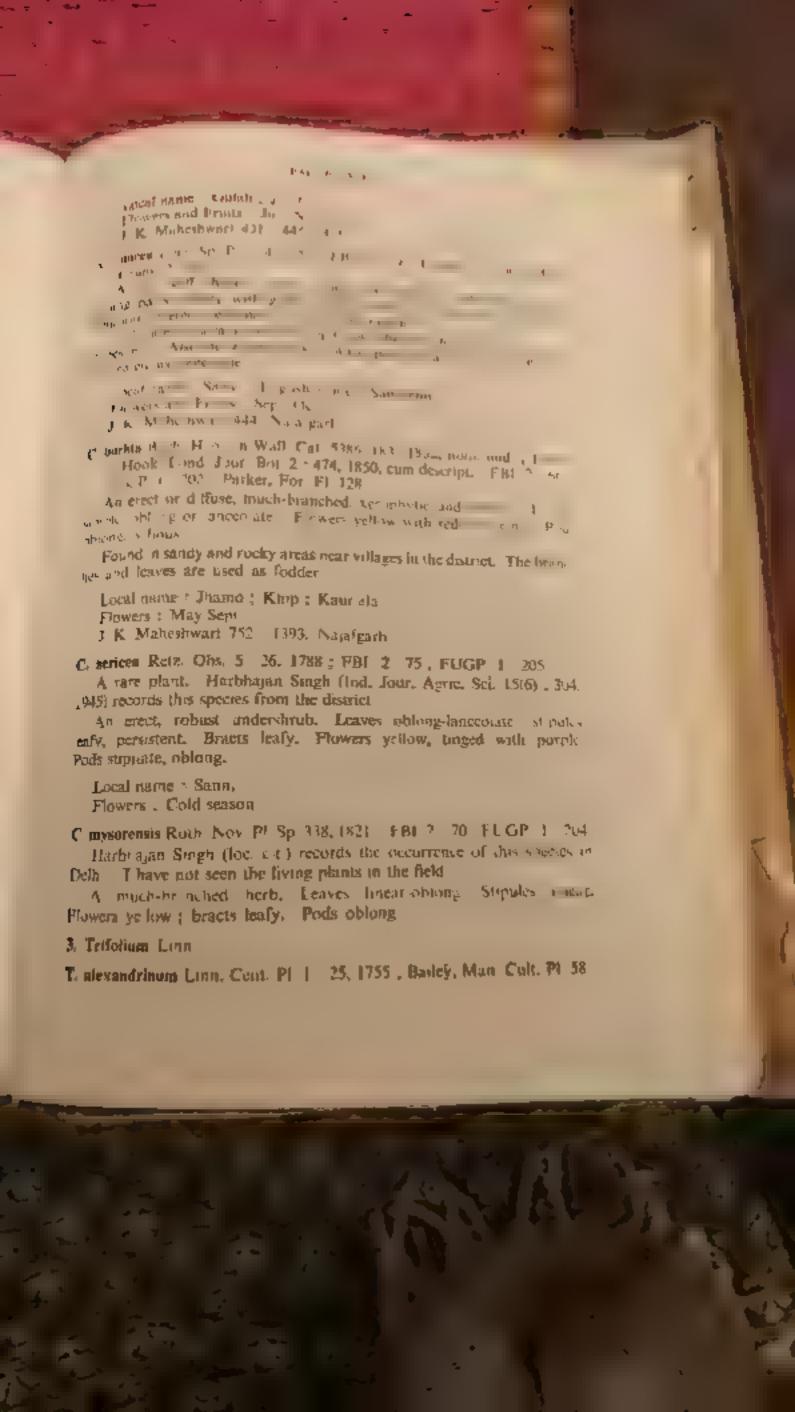


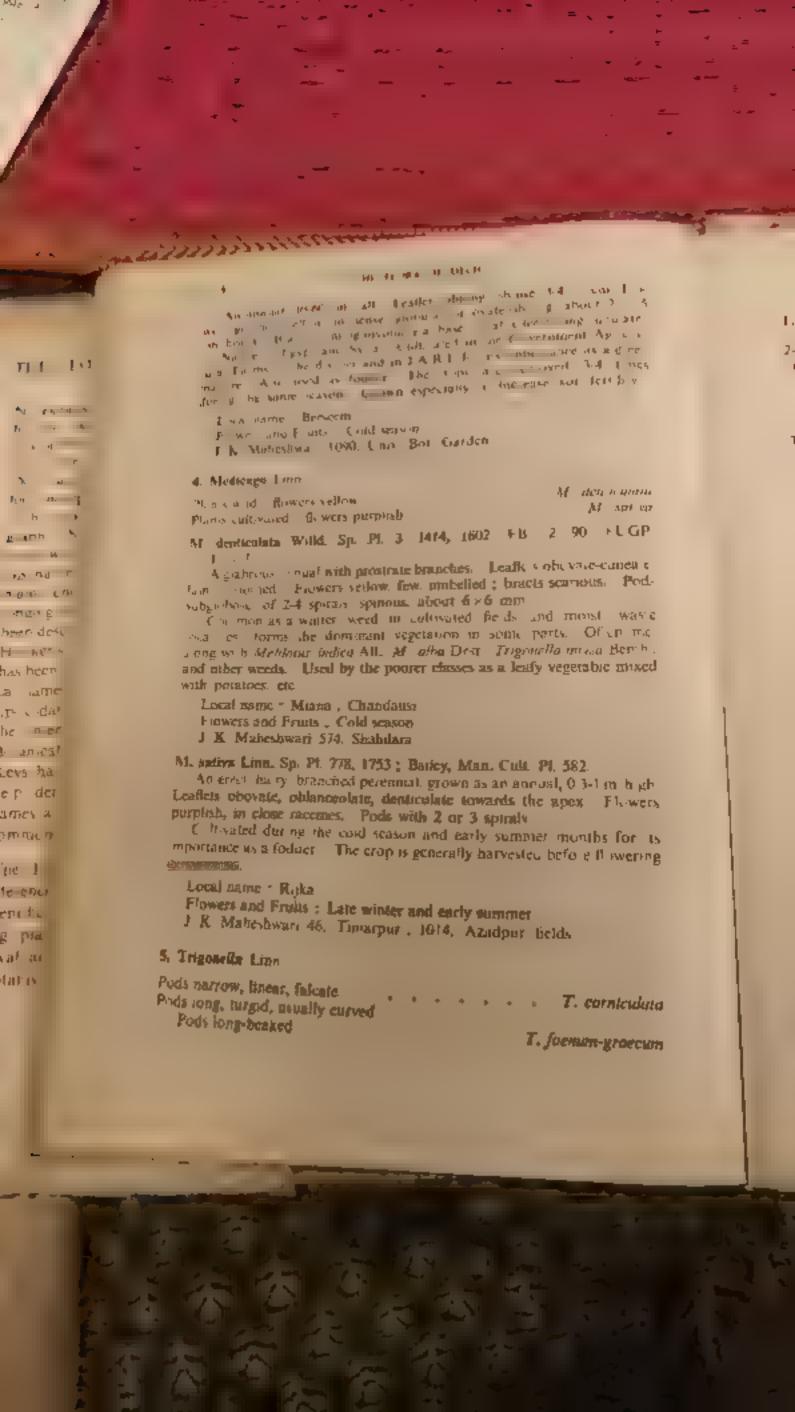


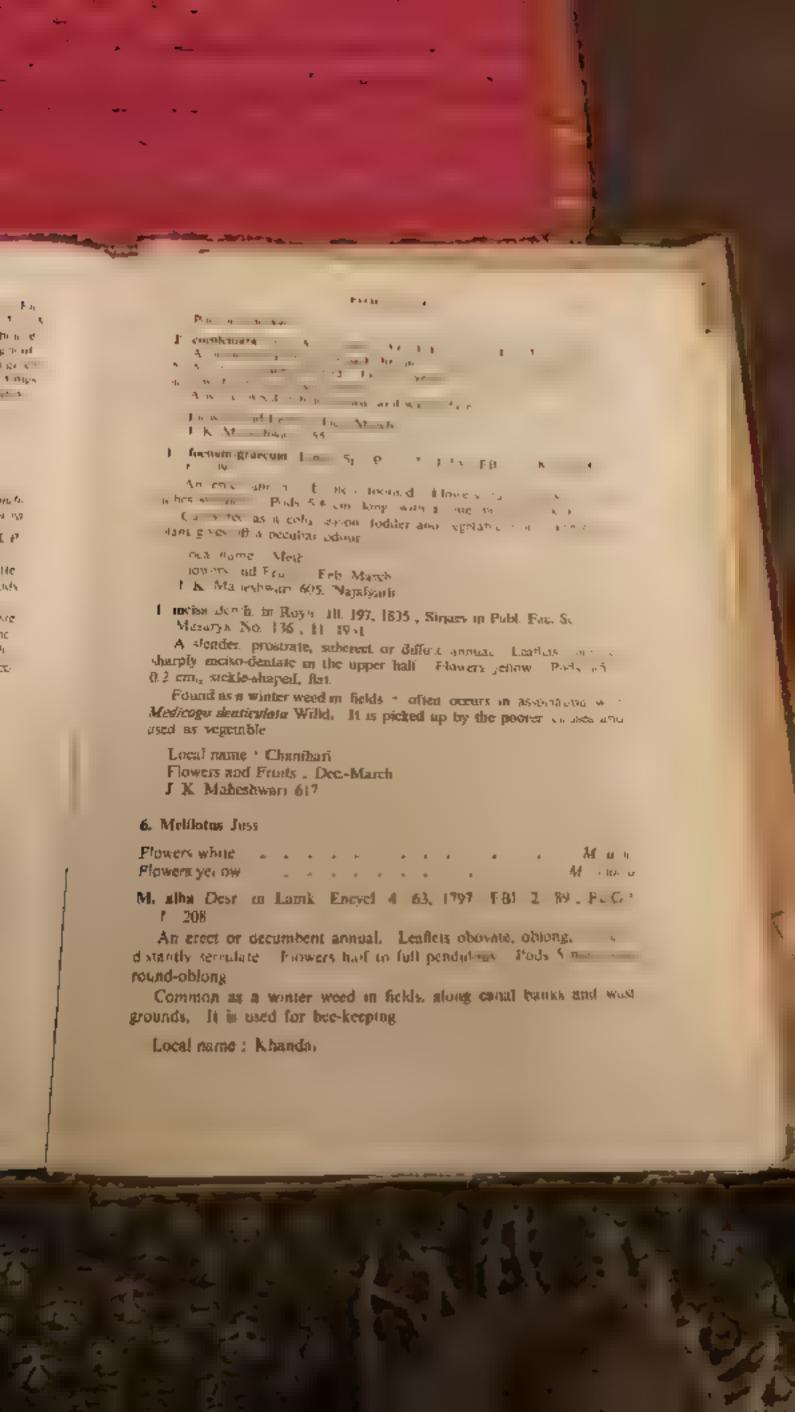


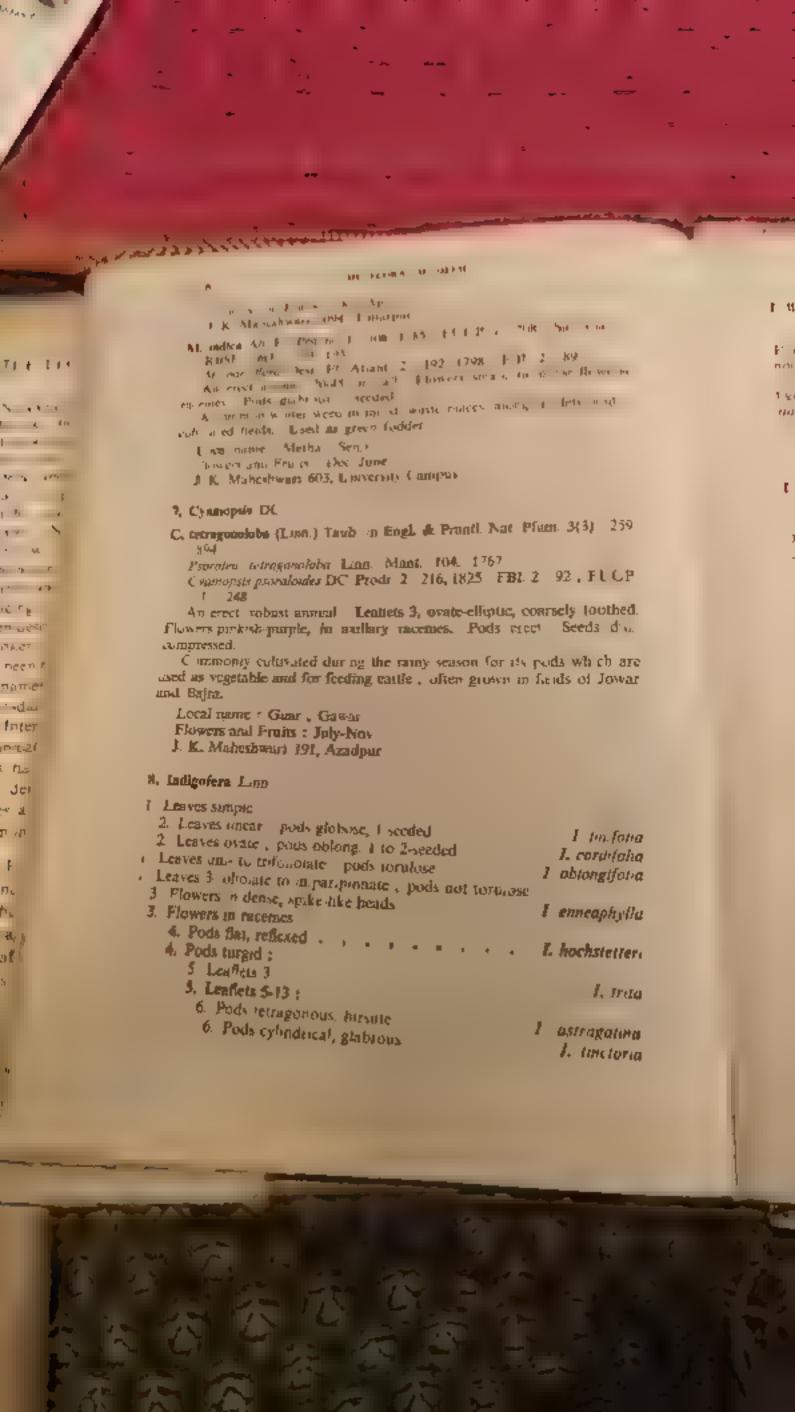


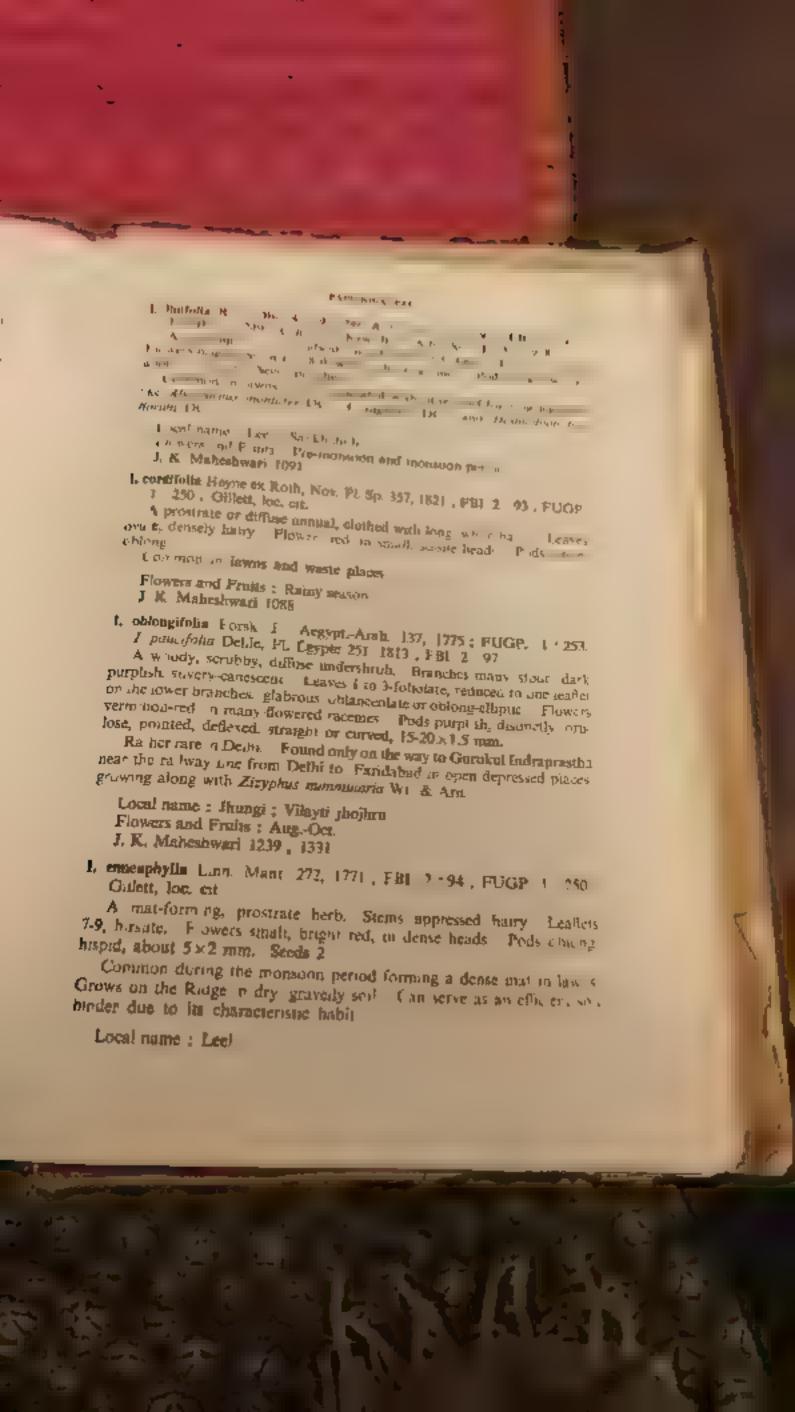
f: j

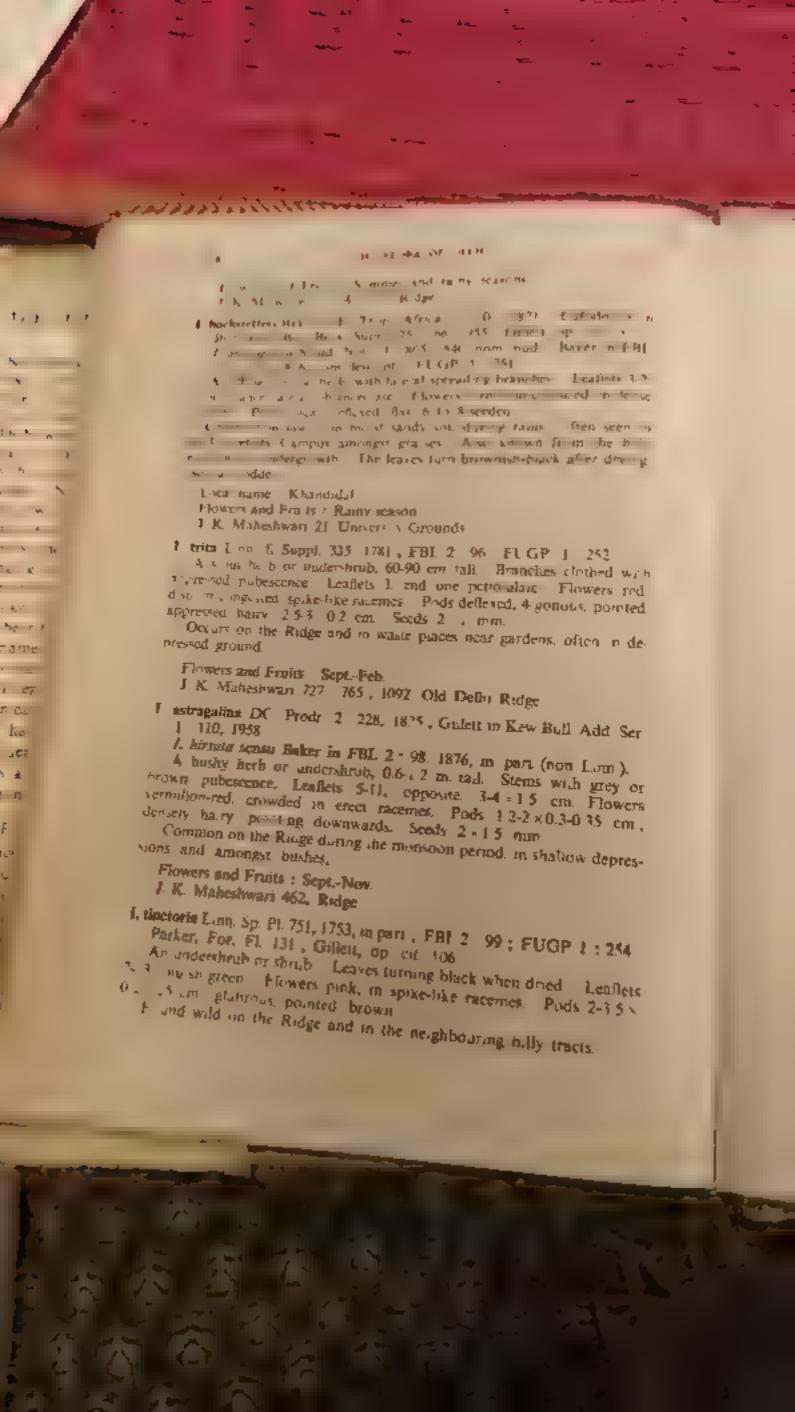


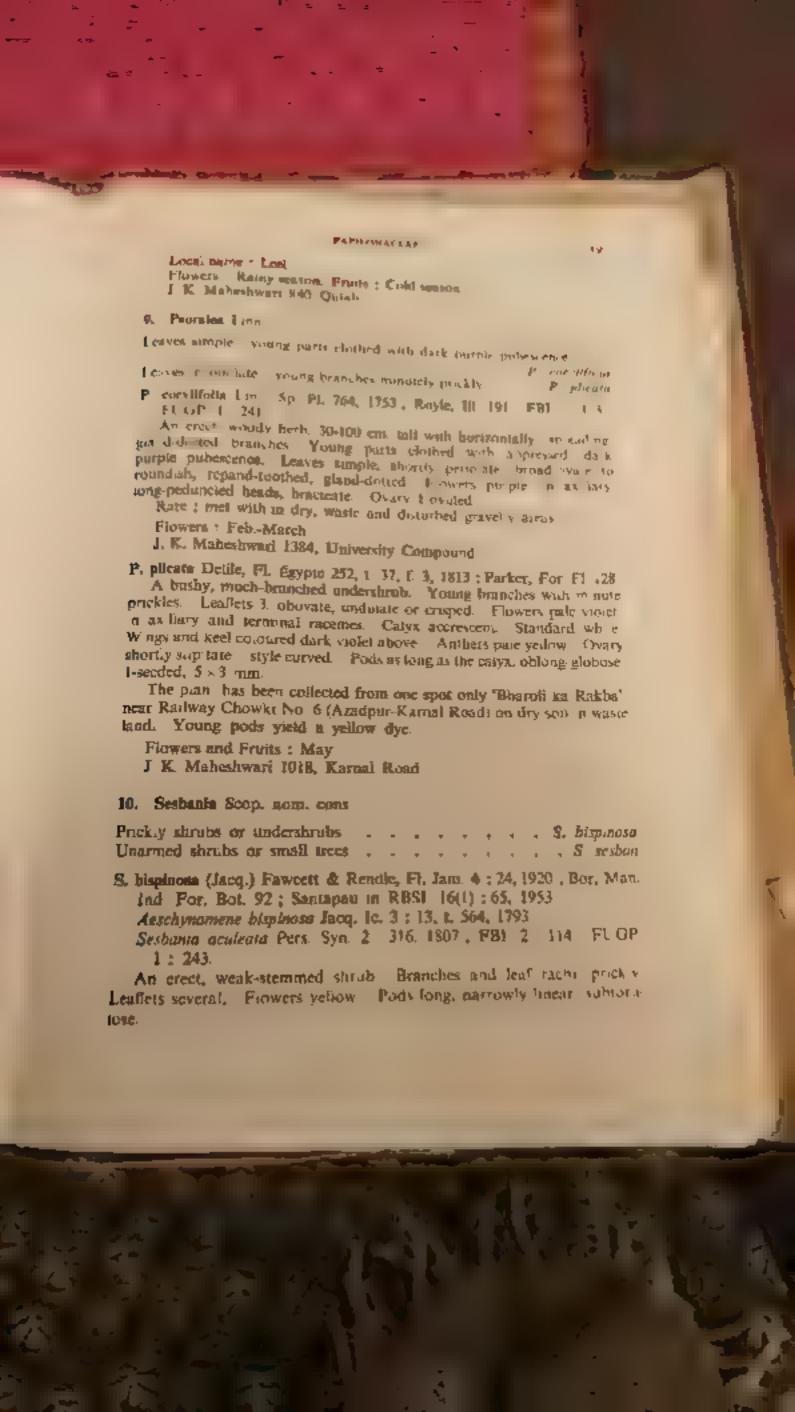












THE PLOUS OF OUR DE

Finance among cannot banks and also in outries of and follow ficials

I worden Thedban

12 ..

or a che

5 19

14

71

46 4

PF

0.37

me

J. L.

100

bds

13

0

ij Г 1 45

r was and Profits Sept affer J. K. Michestoware 446, meng Namigarh Carint

215 9 2 Hore Recorded to a 2 Metr in Phicp Jon S. (B. )

I a J or Best 9 Benthall, I ees than 43

1. A monen, seehen Lina. Sp. Pl. 714, 1753. 5. June, news makes Pers. Syn. 2 116, 1807 ; PBf 2 - 114 ; FLICIP 242

A grain room toft wooded, large throb or onall tree. Leaflett, many 15.15 0 + 0.6 cm linear obtong. Flowers paid ve low mat ion or x Itooping Pods (\$23) 0.4 cm, torolose twisted, many-seeded. If vated in the city and neighbouring villages as bedge for its quick price hand shade-providing capacity. An excellent gunpowder chargoal wide from its soft, white wood

Local name . Jaft , Rawasan Flowers and Fruits . Cold season

is every venow dotted with purple . . . . . S. aesban vat. picto Flowers dark maroon or purple outside . . . S. sesban vas hicolor

5. sestion Merr, var. picta Santapau, Pl. Saur 14, 1953 S negyptiaco Pers, vas pueta Prain in JASB 66 367, 1897 FUGP

Grows commonly as a fiedge around bungalows and fields and also cultivated.

Local same . Rawasan

Flowers and Frants: Cold season

J. K. Maheshwari 567, Azadpur Road : 744, Kamla Nagar

S. sesban Merr var bicolor (Wt. & Arn.) F W Andr in Kew Bull 93

S aeg):priaco Pers. var bicolor Wt. & Arn. Prodr. 214, 1834, FUGP.

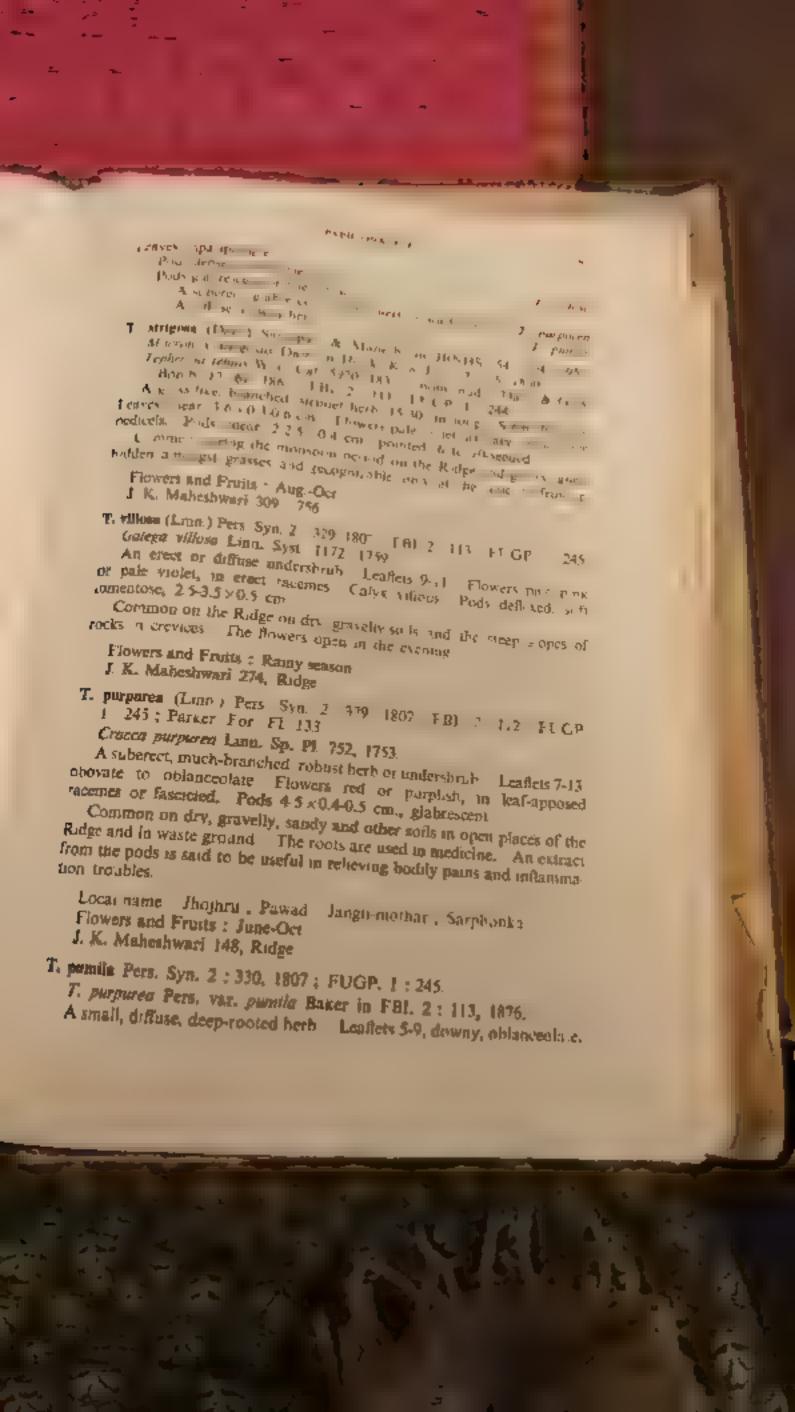
Grown community as a hedge along roadsides and fields. A so ou tivaled for shade. During winter birds are attracted by the dark maroon

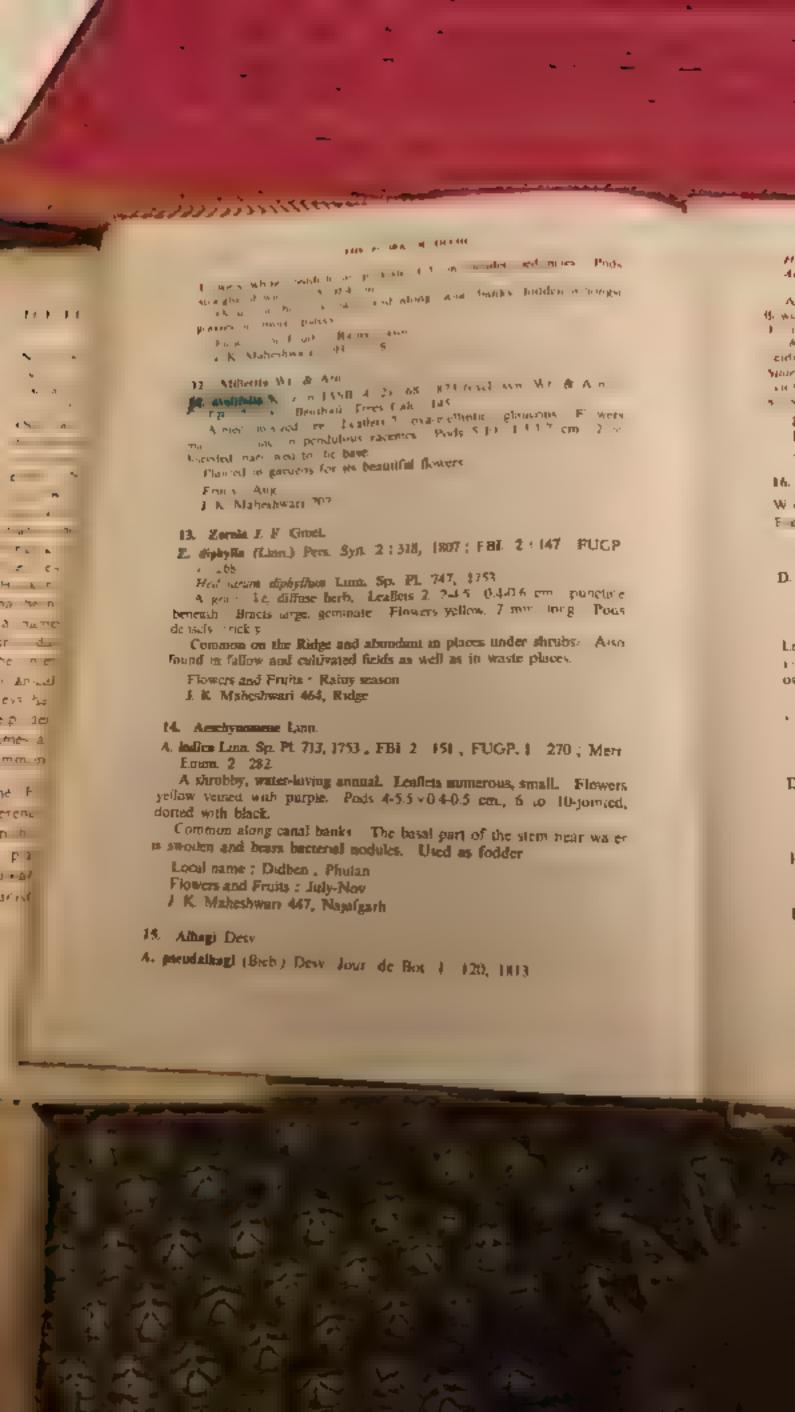
Locus name : Jan , Rawasan Flowers and Fruits: Cold season. I. K. Maheshwari 580, Bela

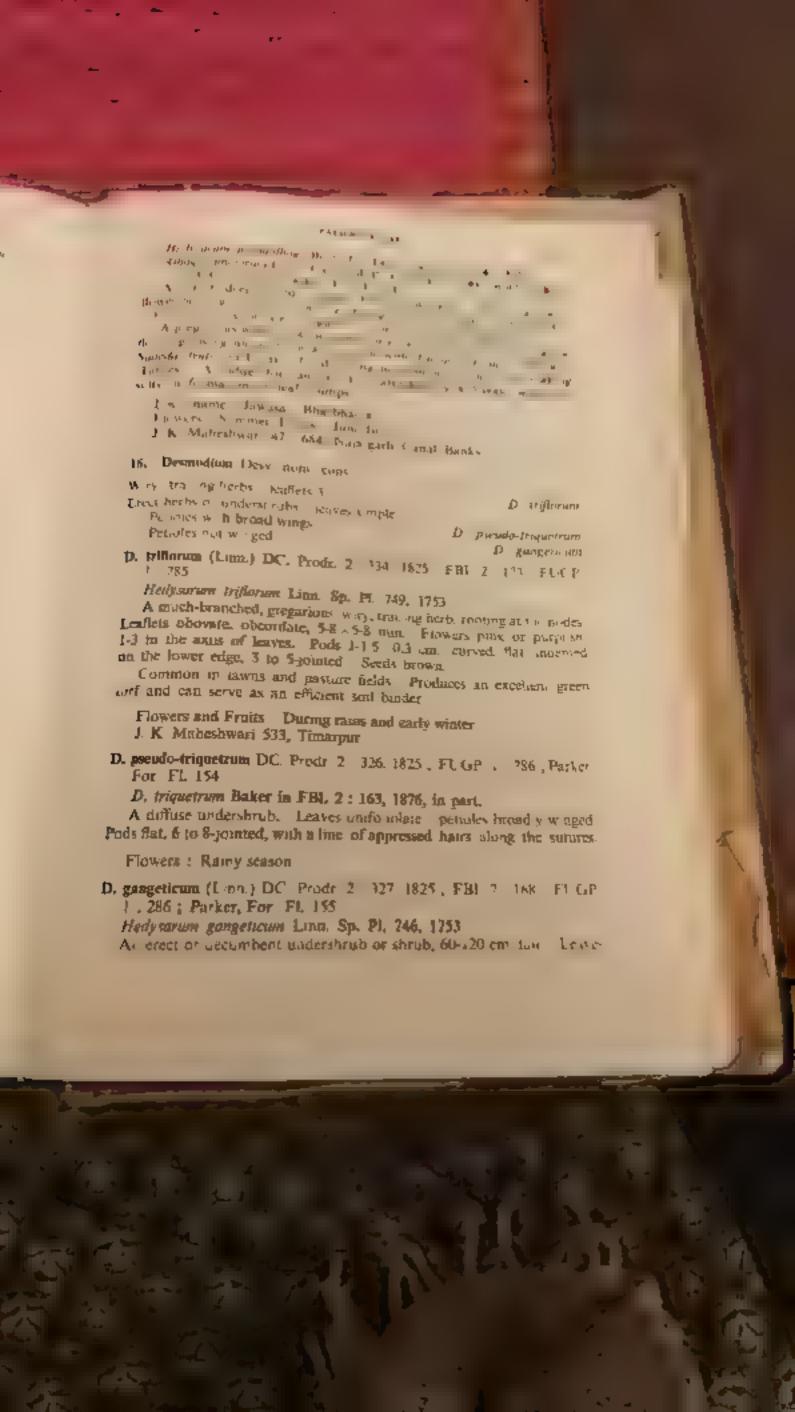
11, Tephrosia Pors, nom, cons, Leaves supple

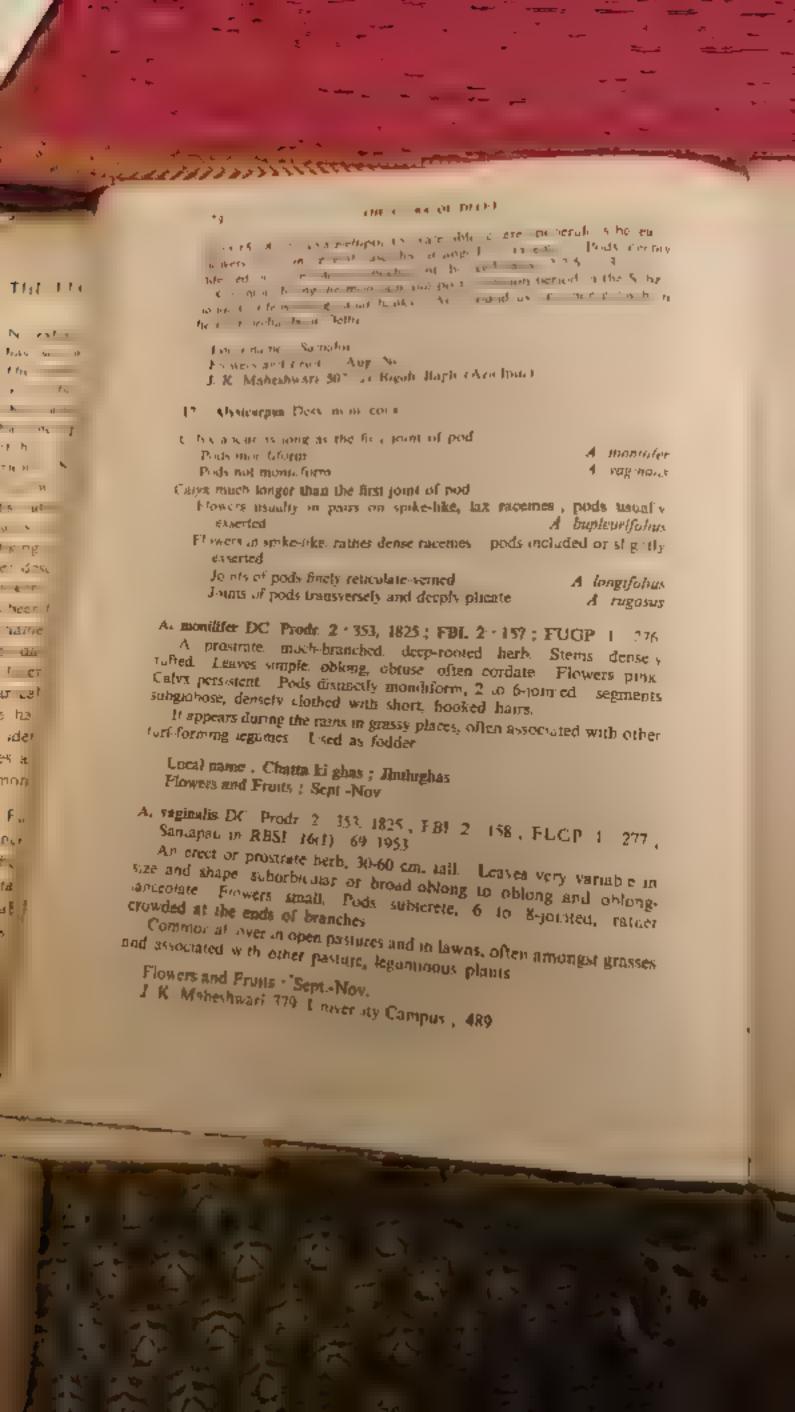
T. strigosa

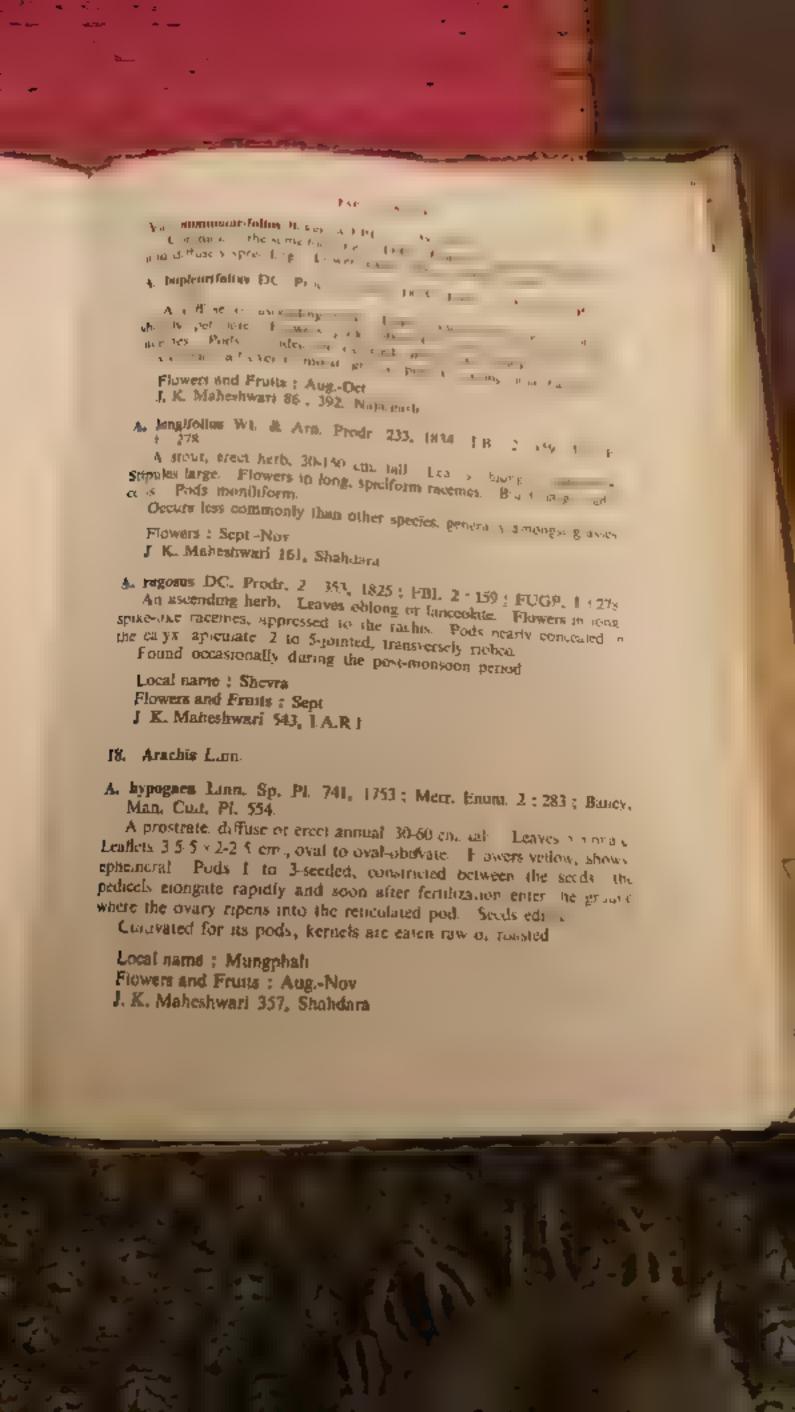


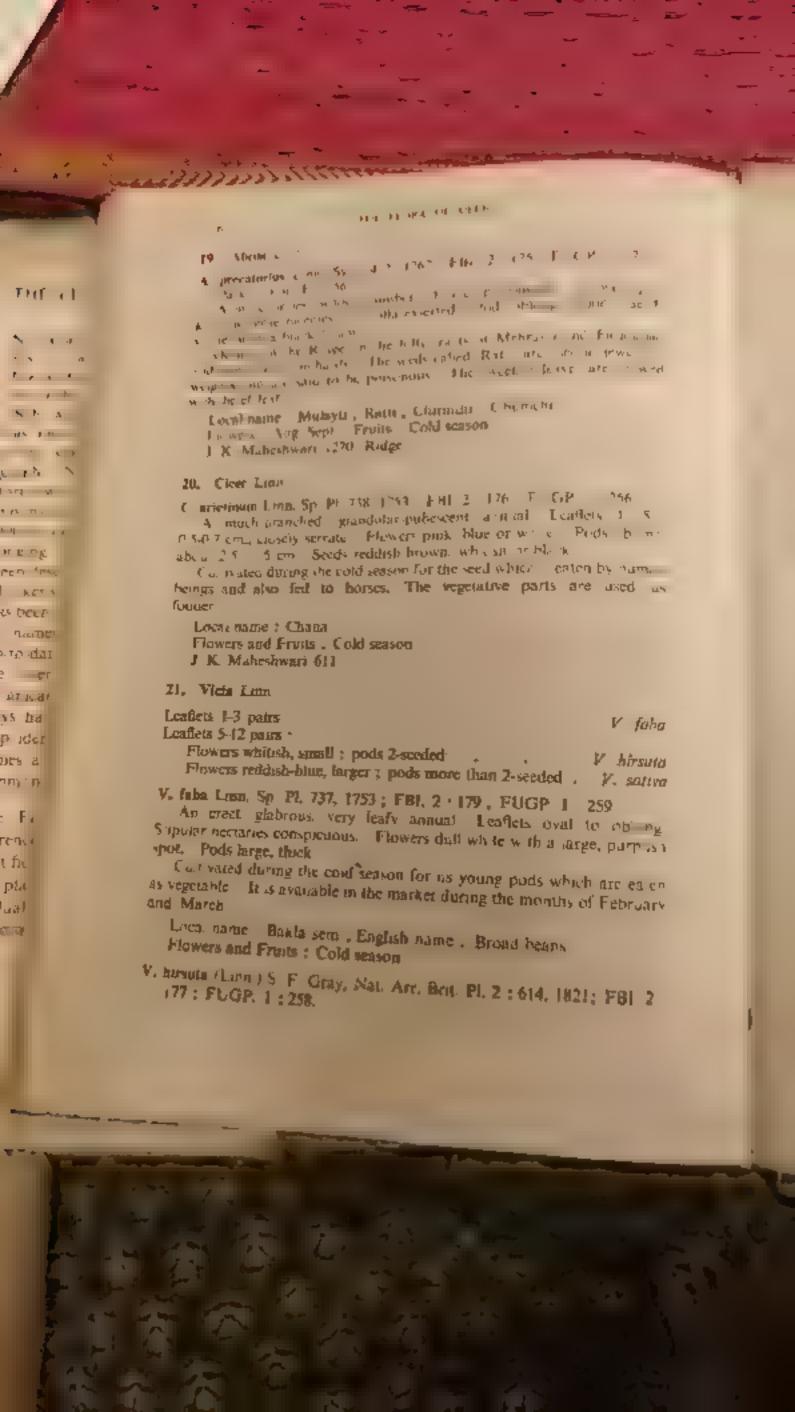


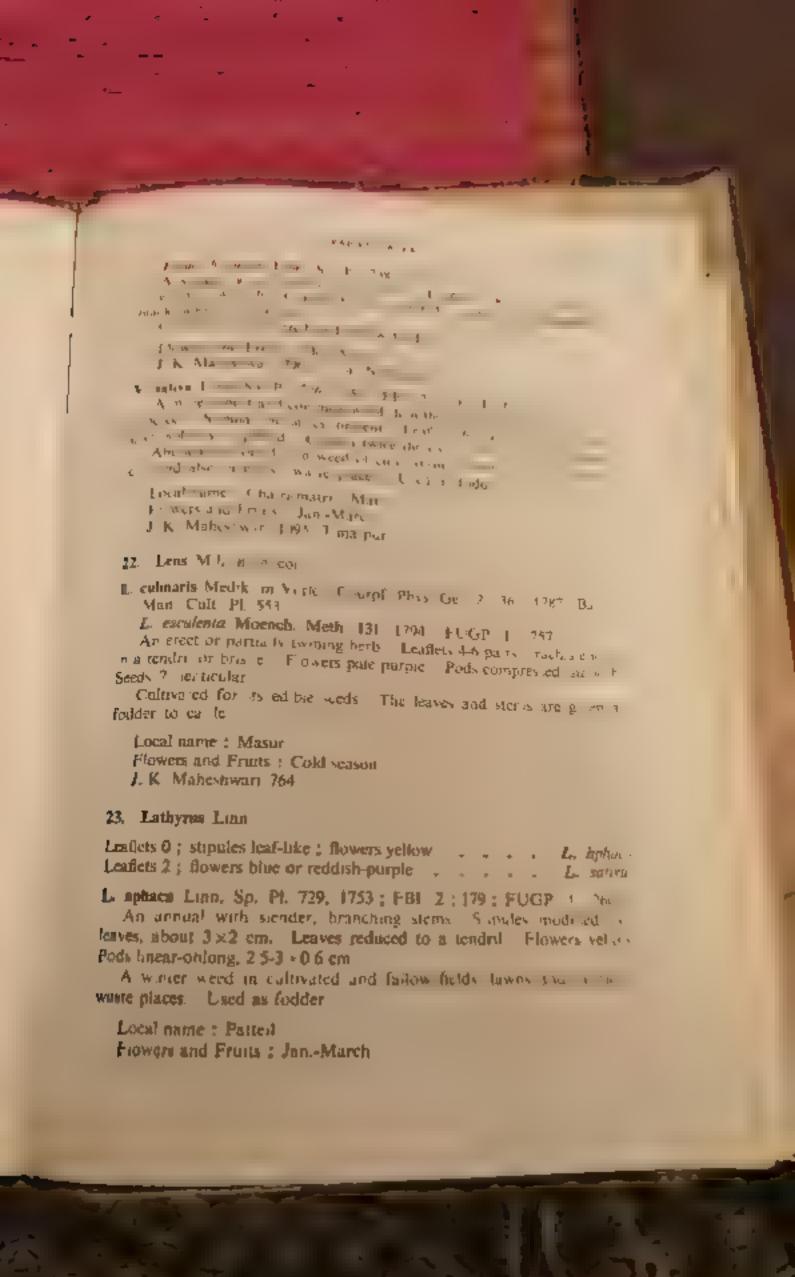


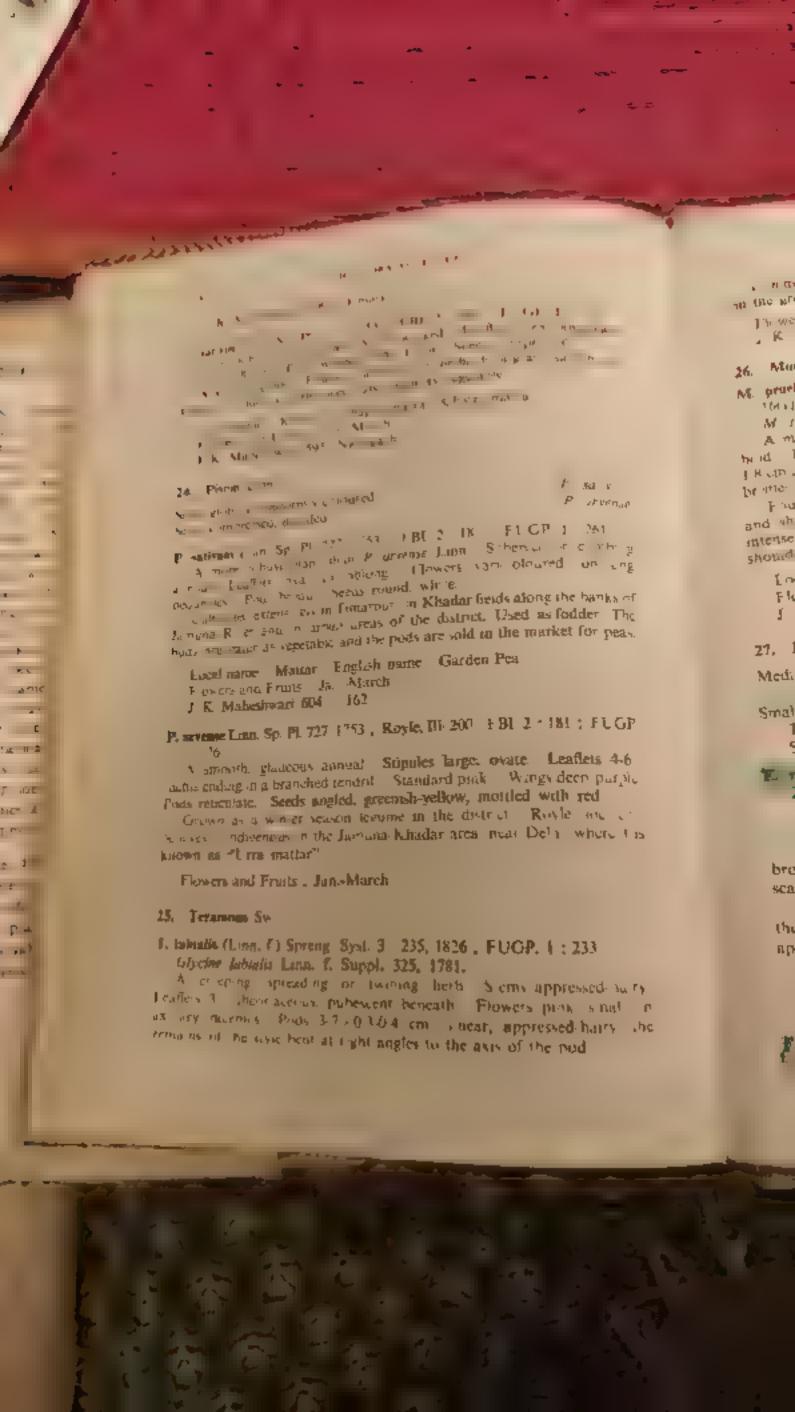


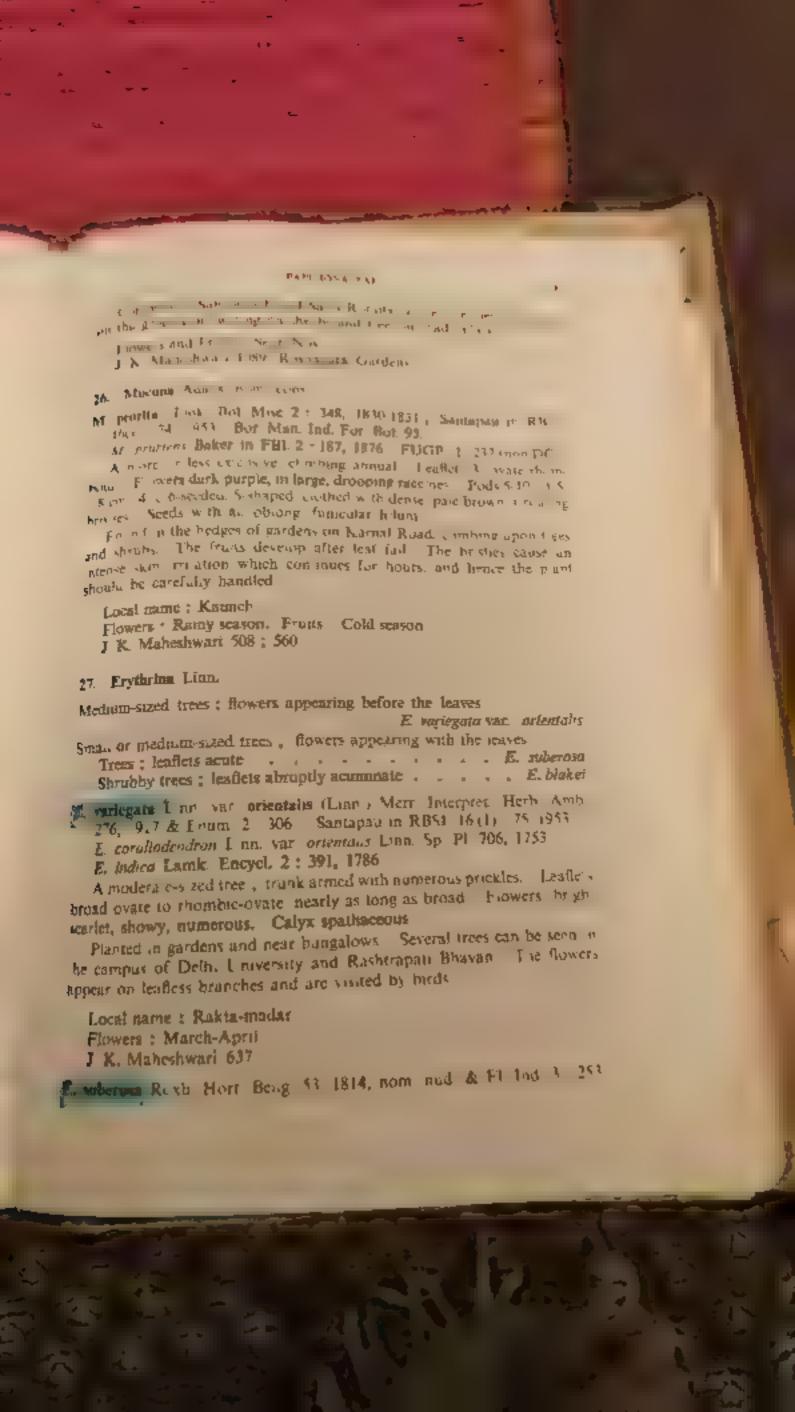


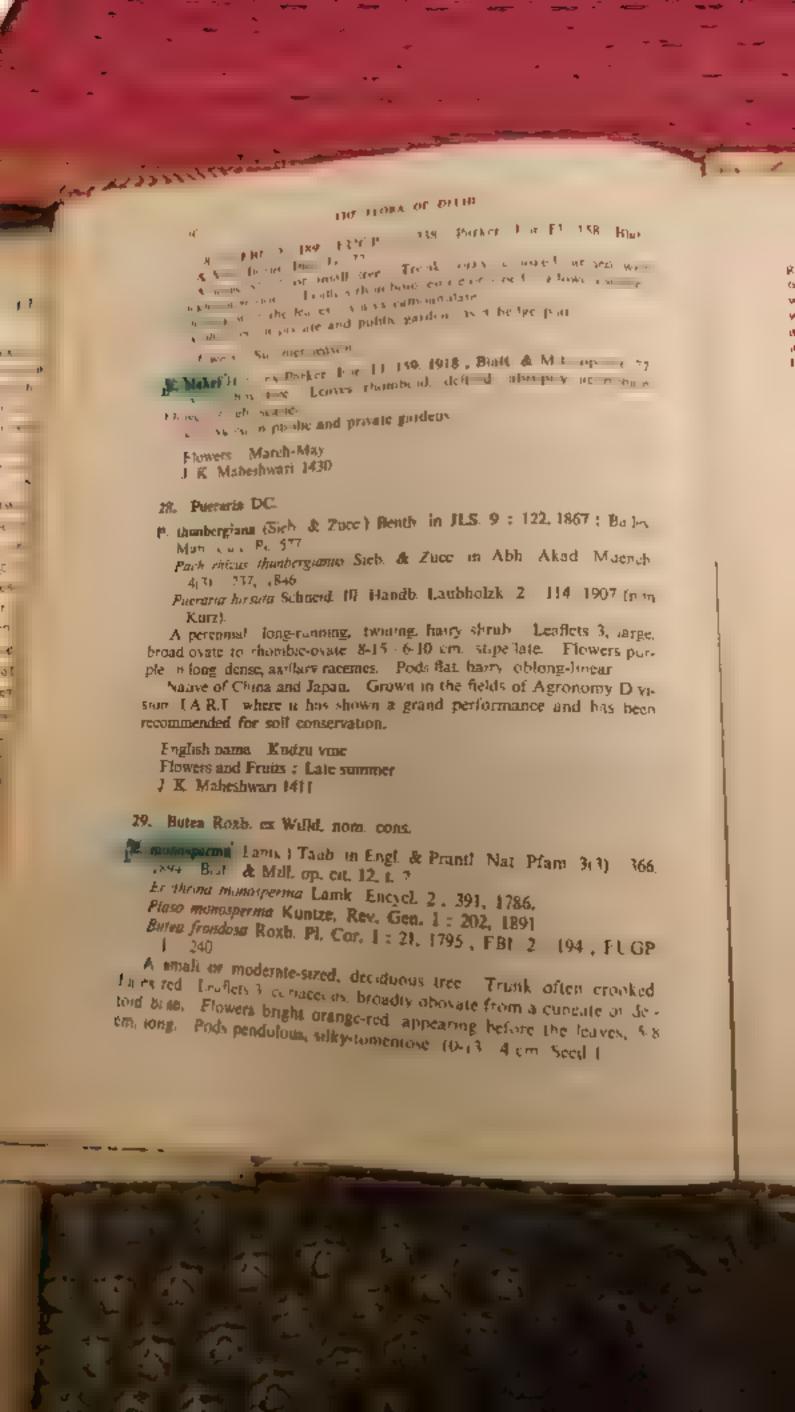


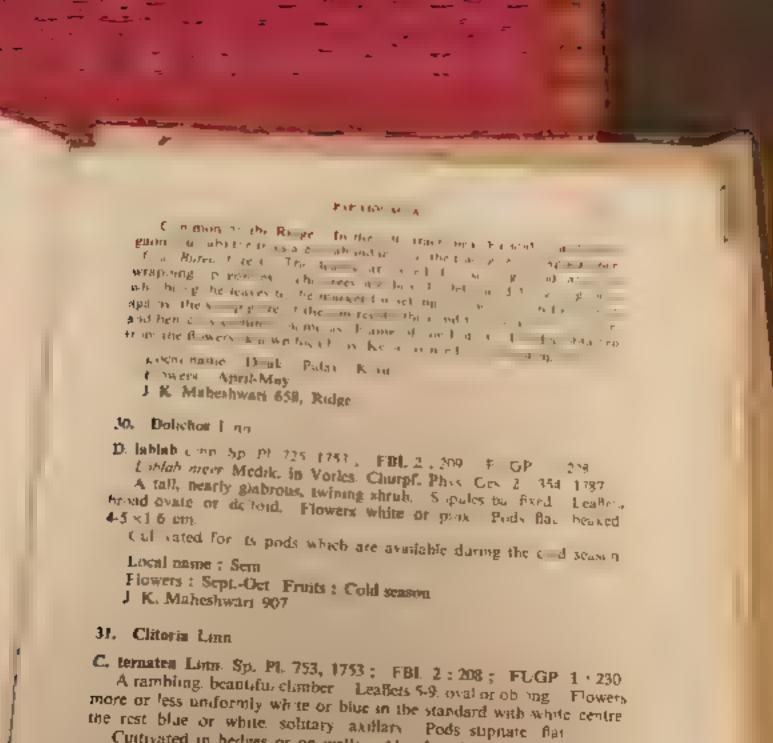










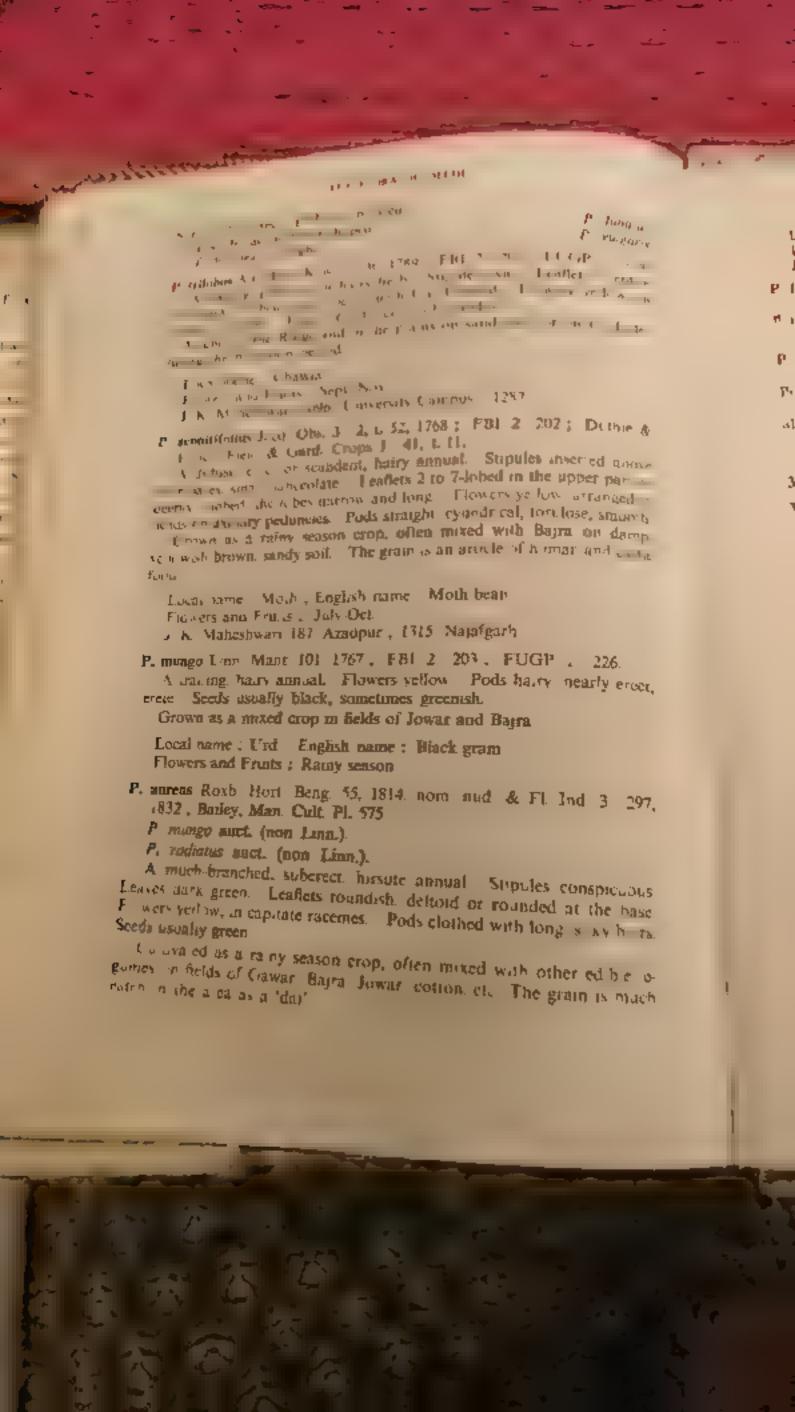


Cuttivated in hedges or on walls. Also found as an escape

Local same : Gokarni Flowers and Fruits: Nov.-Feb J K Maheshwari 275

## 32. Phaseolus Linn.

Stipules inserted above the r bases pods cylindric Pods nearly glabrous Supules large, oval Supules small, lanceolate · · · · P. aconttifoli · Pods hairy Seeds black, oblong; pods long-hairy P nune Seeds usually green nearly globular pods short bury



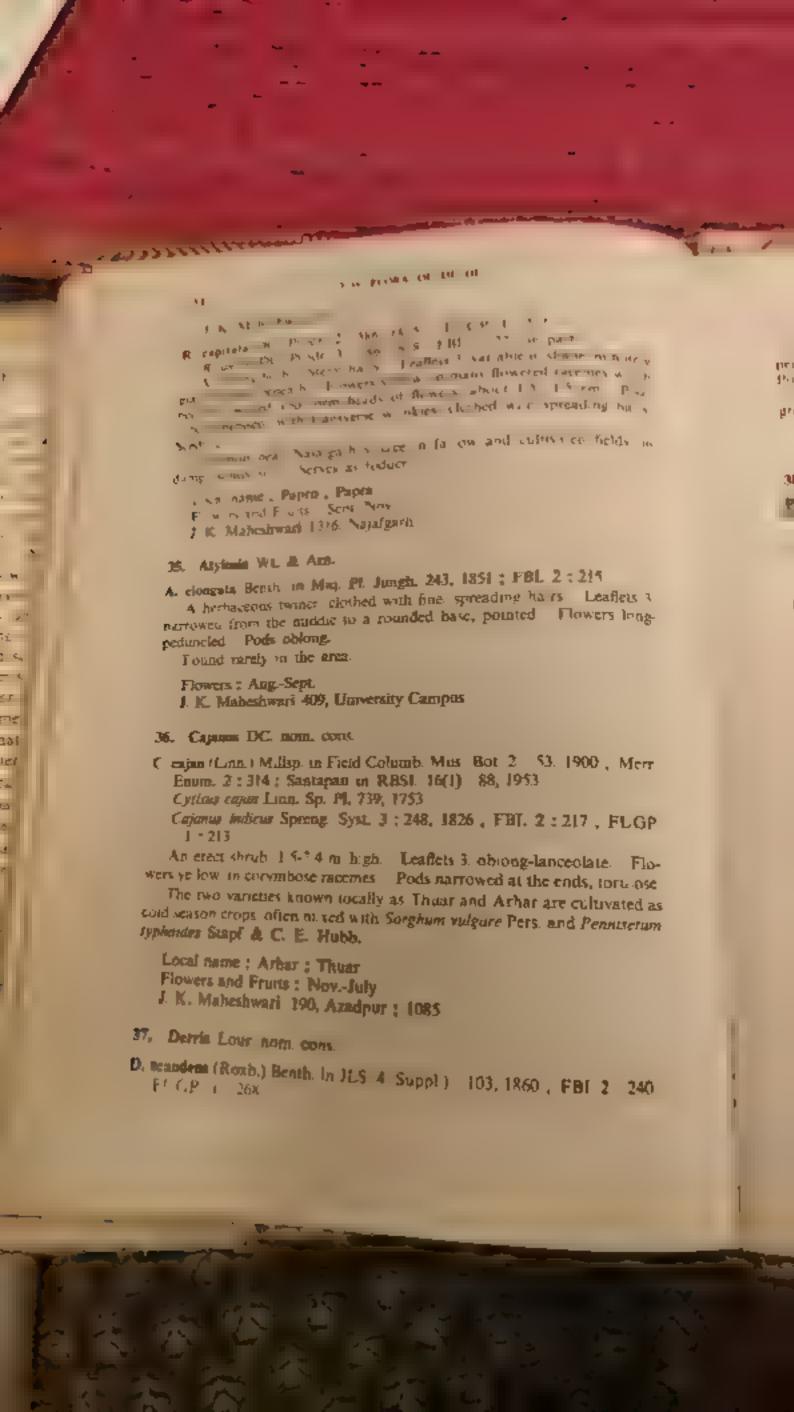
PAPER OF ALSE! h, Crimine Mining F. was an Er. Sept. in J. Ja. Market Land of the American Planetus Lot So in So that any 13 Gal A do not a proper to the strength of a second strength P enigazia and No 25 to CSC1 (18) 5 to 15 to 15 to 15 A subserve of me up & t as not on! I however while any Plate (P. 5. P. Conc. meat of 1981 guideout to transect consists for one which is used as segment of their the it is not been been been been to Appel Locus same 3 by sen Liplish mane futur bears 33. Vigna Sav V. sinemis (Linn.) Savi ex Hessk. Cat. Hort Bogor 279, 1844; Savanyav n RBSL 16(1) 80, 1953 Dollchon sinensis Linn. Cont. Pl. 2: 28, 1756 1 1gras anjung Walp in Linuxea 13 533, 1839 FBI 2 205 , FUGP 1 - 227 A subcreet or twining annual. Leaflets 3, entire or slightly lobed Flowers yellow or reddish. Pods linear, subtorulose Cultivated during the ramy season for its grain, often mixed with miliets and other crops. Local name : Lobia ; Rawas Flowers and Fruits: June-Oct. J K Maheshwari 188, Azadpur Rhynchosia Lour, nom. cons. R. minima (Linn.) DC Prods 2 - 385, 1825; FB1 2 223; FUGP I : 222. Dolichos minimus Line. Sp. Pl. 726, 1753.

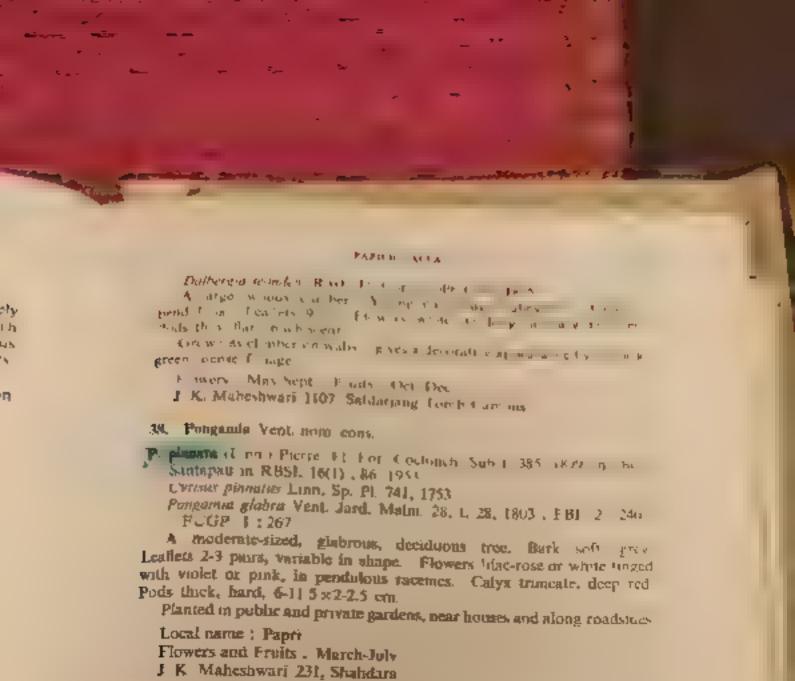
A spreading or twining, glabrous, slender annual Leaflets 3, deltoid at the base, minutely yearw guind-duited beneath. Flowers yellow, in lax racemes. Pods 1-2 × 0.5 cm., usually 2-seeded.

Common during the rains in the absence of proper support, it spreads on the ground. On the Ridge it twines around herbs, shrubs and 20.4

Flowers and Fruits: May-Nov.







39. Dalbergia Lum. f. nom. cons.

D. sisson Roxb. Hort. Beng. 53, 1814, nom. nod. & Fi. Ind. 3, 223, 1832; FBI, 2:231; FUGP, 1:264; Parker, For. Fl. 166.

A small or medium-sized tree Bark grey. Leaflets 3-5, acommate Flowers yedowish-white. Pods 4-7 \ 0.7 i cm., strap-shaped, 1 to 3-seeded.

Planted along roadsides, in villages and introduced on the Range Flowers appear audden y and fruiting takes place in a short time

Local name: Shisham

Flowers: March-June. Fruits: July Aug

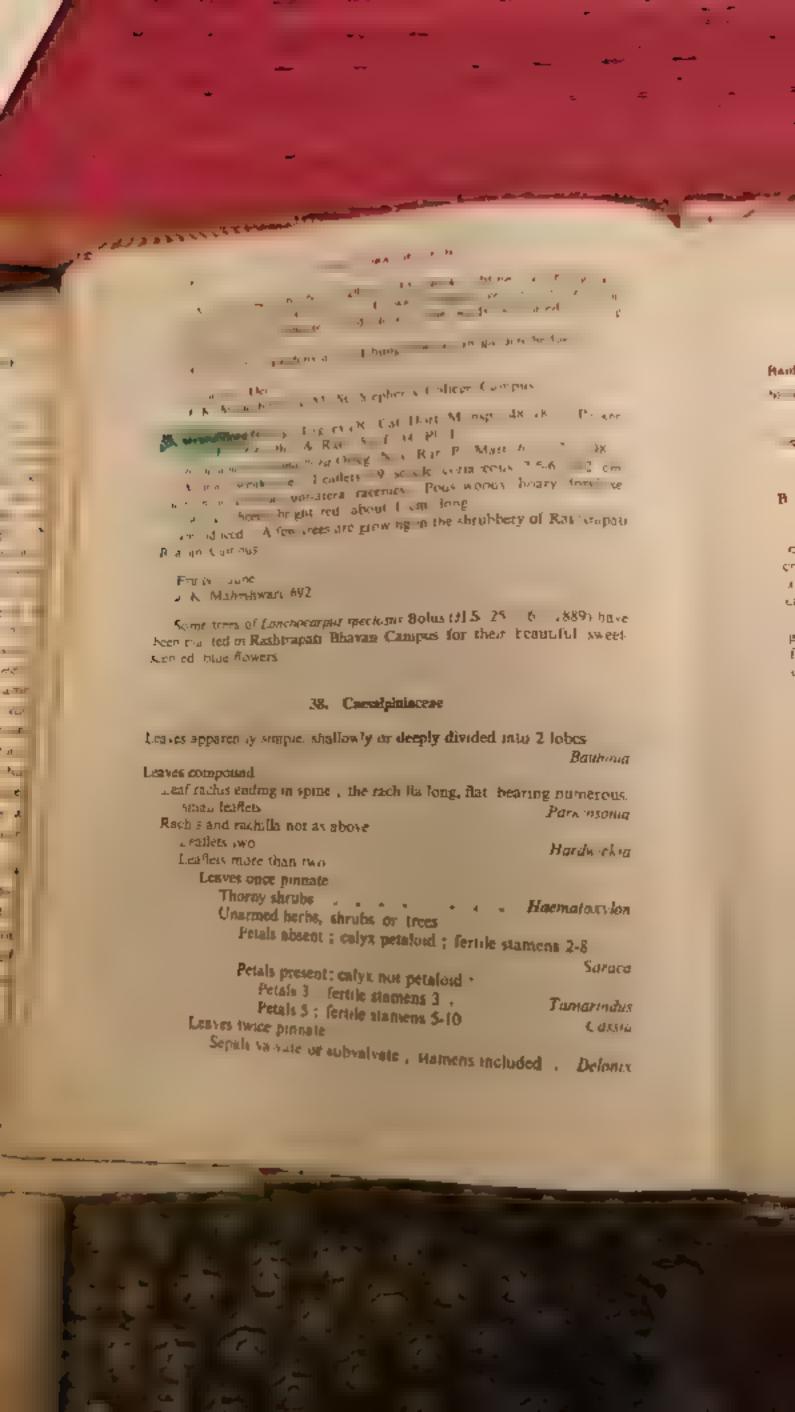
J. K. Maheshwari 14; 967; 1086

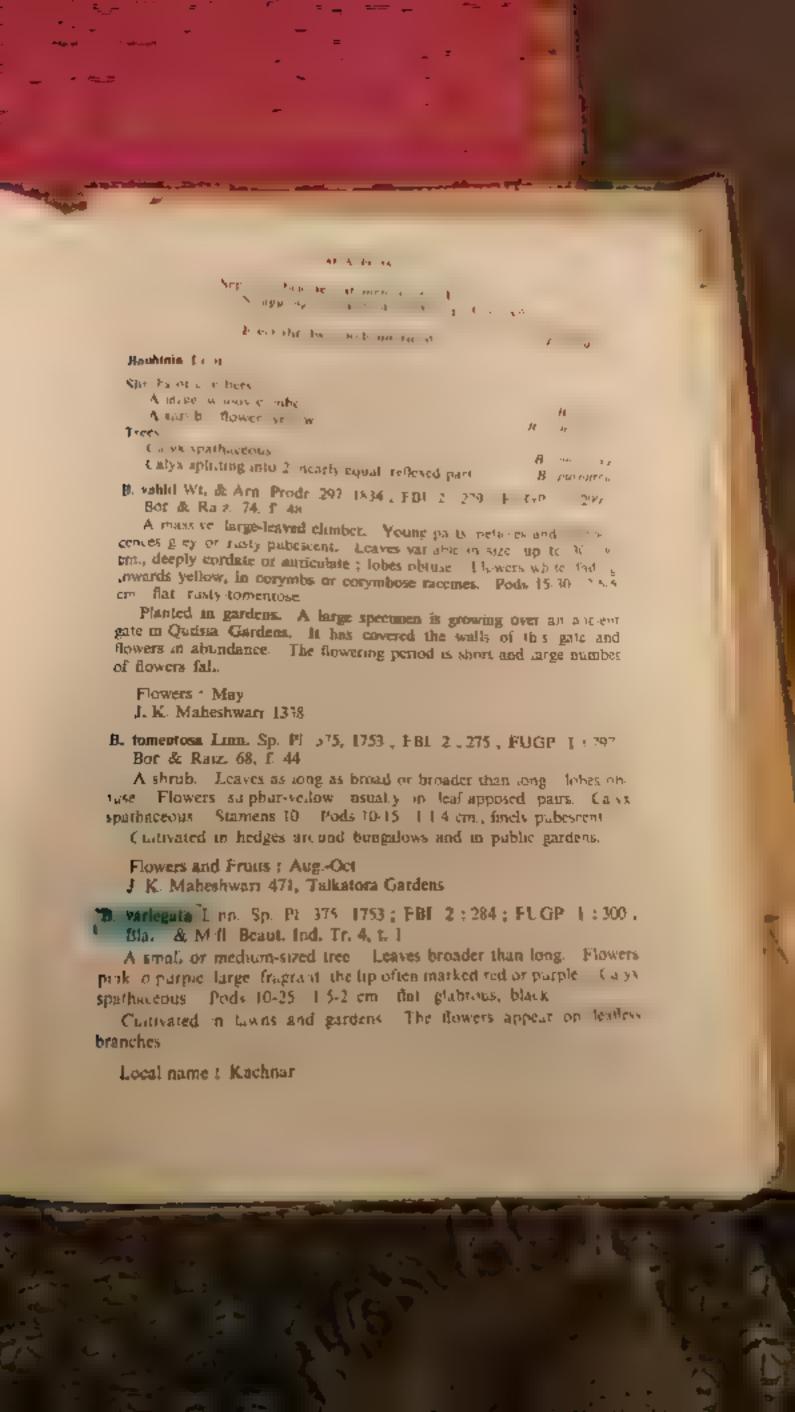
40. Sophorn Linn.

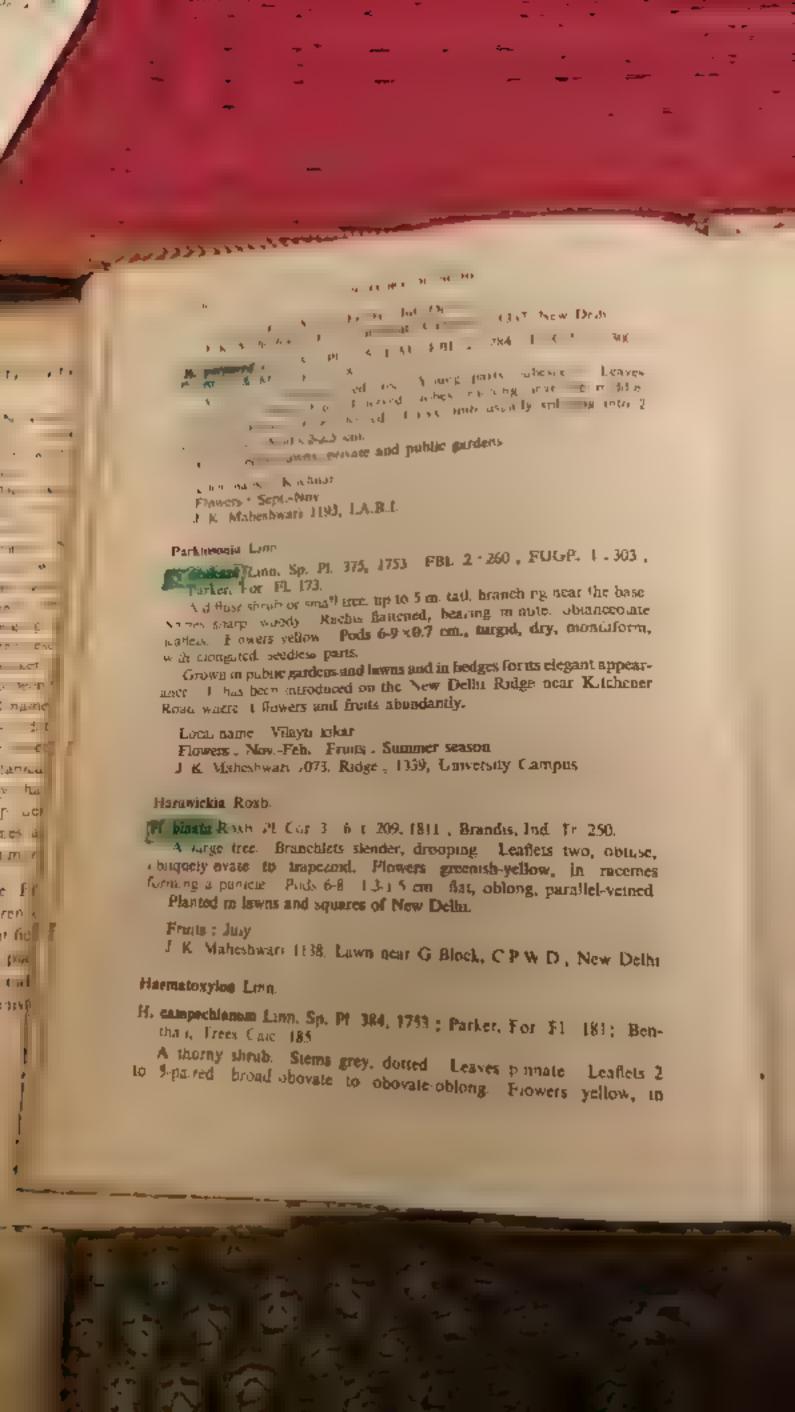
Leaflets oblong-orbicular; flowers yellow Sea normal Leaflets oblong-ecliptic to subspathulate, flowers violet-blue Sea normal new research

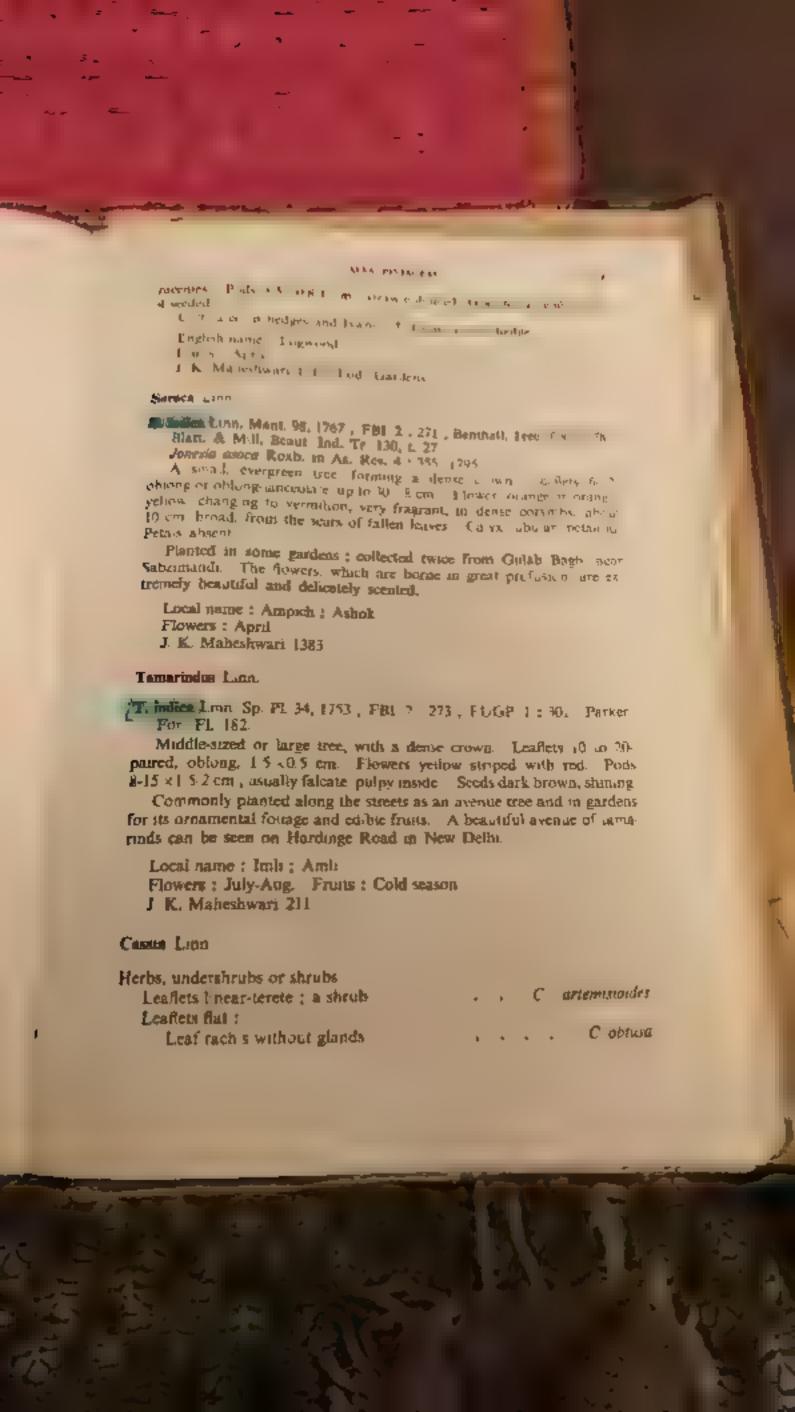
 S. tomentosa Linn. Sp. Pl. 373–1753., Merr. Enum. 2. 270. Roy & Raiz, 50, Pl. 16.

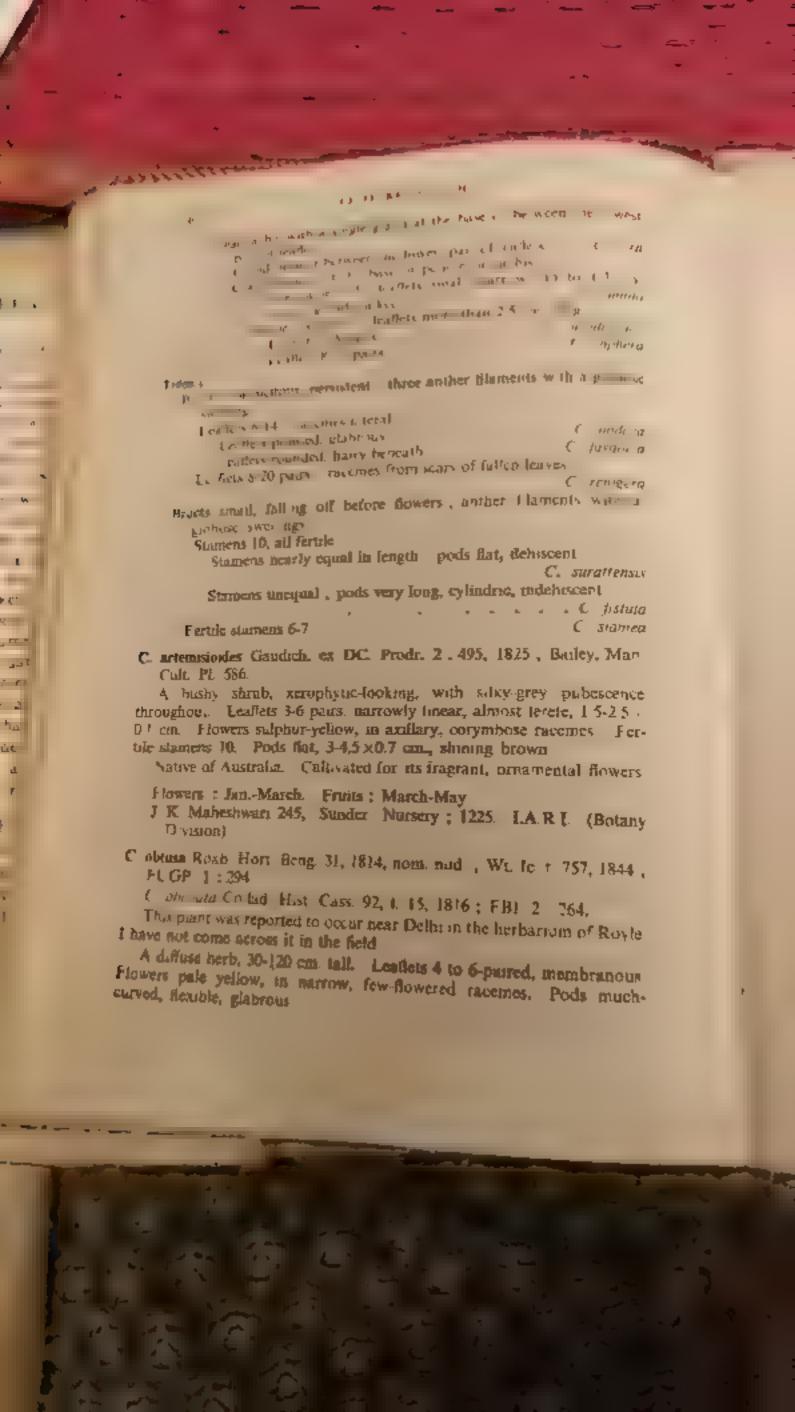


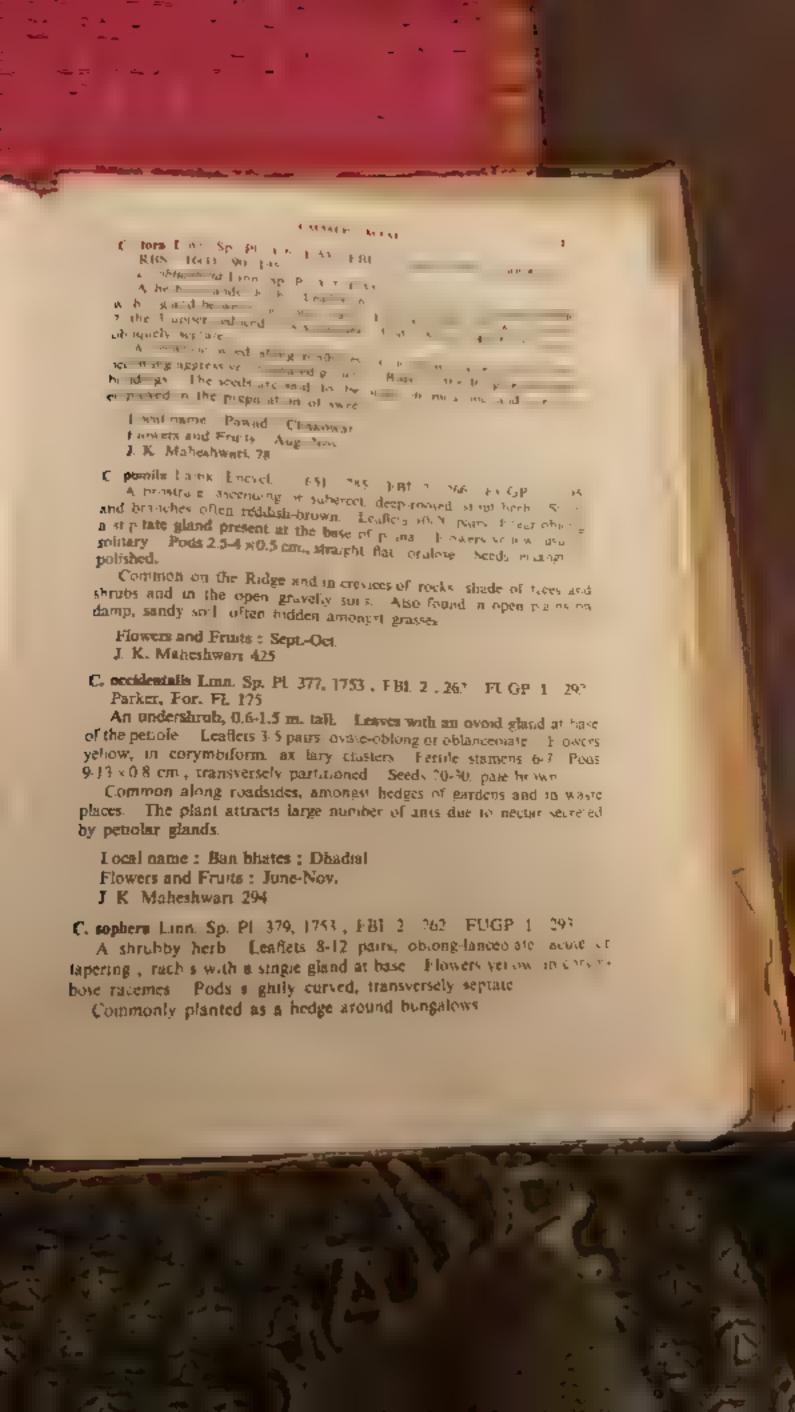












FH?

Local weaps. Kas aid. A Make house my skot

Compared the form of Roch II a Oct a 4.4 months of & grant of the second of the second

A vote necessary, ed e crotern tree with a sit et granted e ou as I to re appeared up to sun. Burk to lid va brown or ask a lated of n re and leaves contemporary Louisity and code by I were to it when shows neaccours brought years arrived

Posts -- indirect, 30-45 cm long. Planted to the lawns of gardens for its ornamental flowers and for age

Flowers: Muy-Aug J K Mahcalowasi 774

Firente f un Sp. p) 179 | 751 Blatt & Mill op eft 27 : 4 A ned am-s zed tree Leaflers 12 20. F wers and leaves together ank feating to wrate. Sepais red. Stamens 10, three with swelling Planted in gardens.

Flowers : June J. K. Maheshwari 691, Rashtrapati Bhavan Campus

Cartagora Wall Car 5307 1831-2, nom. ned Benth in TLS. 27 518, 18 1 FBI. 2 - 262; Blatt. & Mill op. cit. 35, 1 5

Flowers n racemes, on leafless branches. Sepals red Stamens 10. Pods smooth

Planted in gardens

Flowers: May-June

urattetsis Burm, f. Fl. Ind. 97, 1768.

C glauca Lamk, Eucycl. 1 · 647, 1785; PSI, 2 · 265 (excl. syn. C fastigiota Yahl) ; FUGP. 1:292.

A small tree Leaflets 4-6 pairs, pale green. Flowers yellow, in asiliary corymbs. Stamens 10, nearly equal. Pods straight, flat, thin Planted as a hedge in gardens.

Flowers: Sept.-Oct.

C fision Lien Sp. P. 377, 1753 , FBI 2 . 261 , FUGP. 1 291 , Blatt & Mill. op cit. 19, L 3.

A moderate-s red, deciduous tree with thick yellowish or green shgrey bark Teaflets 4-8 pairs, .0-15 . 5 cm. Flowers bright vellow, n in g. drooping, lax raceines. Pods 30-60 x 2-2.5 cm, cylindrical, pendulous among teatless branches. Seeds flat, embedded in sweetish pap.

Our is in a sensew id conduction on the P land for a larger design ment and equares. A collaborate of the company of t Road. The free to are tree and

Lack thome. Amenda

Famers Air July Freits the

J. K. Muhesewar, S. R. tec Road, 500 King, by mor Controls

the stemen Lumb Focks I colle 1915 Fill I voil I am Ma-

A moderate-used or large tree. Bark grey. Leaves or one eglandular Lenflots 12-24, obling famous colling agencies promes clustered at the ends of branches. For it thereon 6.7. It is nearly straight, flet, 20-30 x 1 5 cm., with thickened abtures

Cultivated in gardens for ornamental purposes and also used a NVCTuCS.

Flowers : Summer

J. K. Maheshwuri 661, Talkatora Gardens

The following species have also been reported under cult va or within the area but have not been noticed by me

- C. didymobotrya Fresen, in Flora 22 · 53, 1839 Rock Legam Pl Hawa
- C. roxborghil DC. Prodr. 2 : 489, 1825; Blatt & Mal. op. ca. 33 C marginata Roxb Hort Beng. 31, 1814, nome and & Fr. lad. 2, 338 1832 : FBI 2 · 262.
- C. corymbosa Lamk. Encycl 1 644, 1785 Batley Man Cult Pt 587
- C. eremophile A. Cunn. ex Vog. Syn. Cass. 47, 1837
- C. floribunda Cav Descr 132, 1802 . Wit in Webbia 11 245 ,955 C. laevigata Willd. Enum. Hort. Beral. 441, 1809.

### Delonix Raf

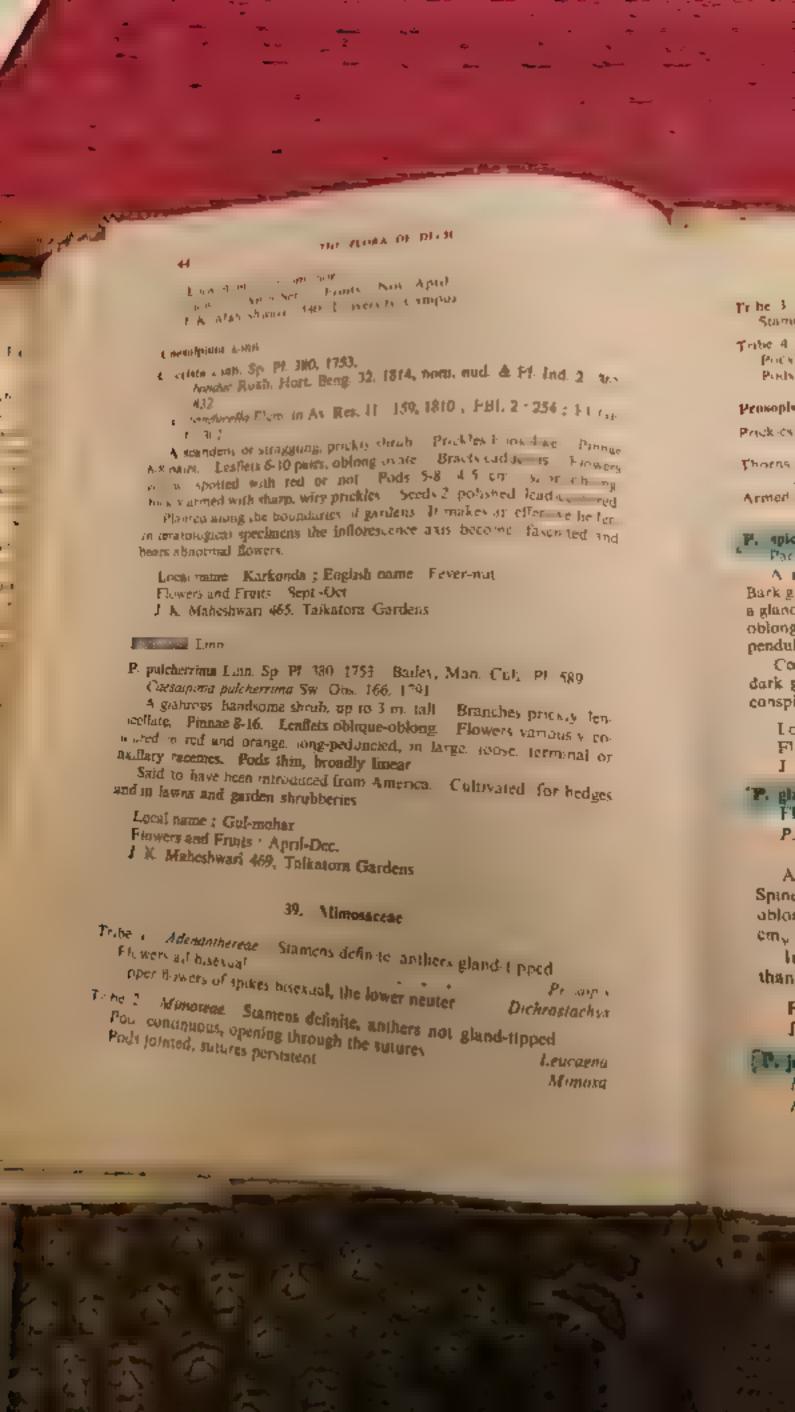
D. regla [Boj ) Raf Fl. Tell. 2 92, 1836, Benthall, Trees Calc 170 Blatt & Mill, Beaut, Ind. Tr. 52, L. 10.

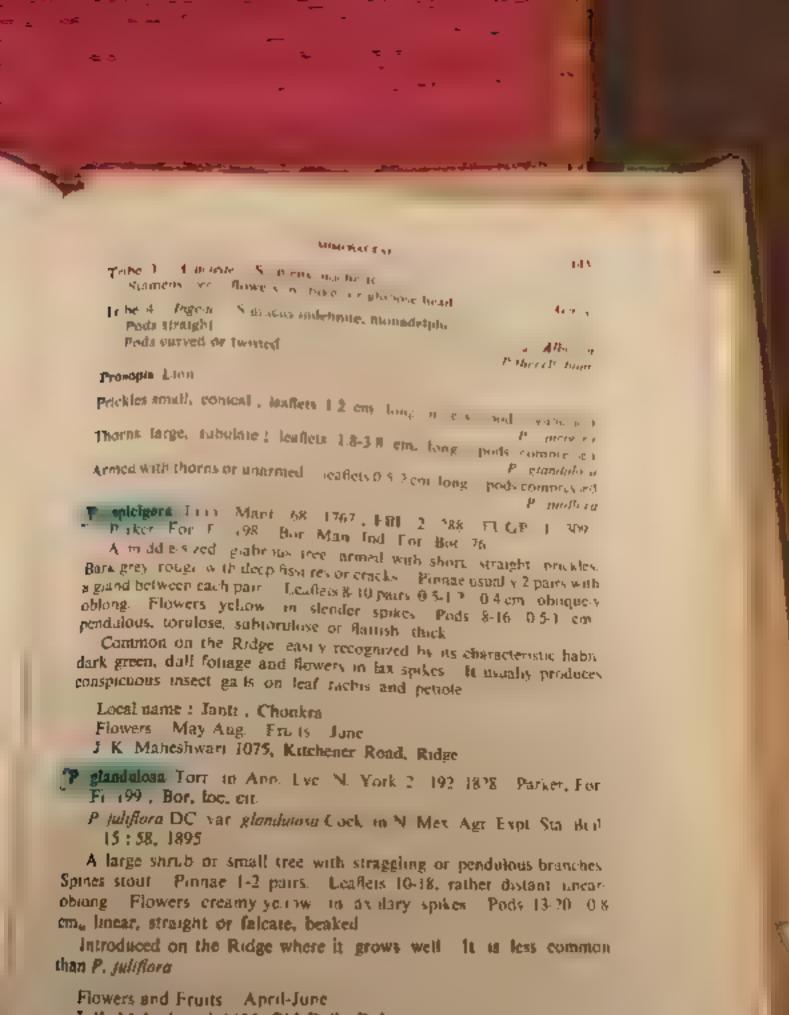
Painciana regia Boj ex Book in Bot Mag t 2884 1879 FBI 2.260

A magnificent tree with an ambreva-shaped crown. Leaves bip anate feathery 60 cm. long. Leaflets about 1.2 + 0.5 cm. The wers red or prangered Pods 30-60 x 5 cm , flat Seeds numerous, oblong.

Commonly planted in gardens, squares and avenues for orname it? purposes and for the shade given by its dense foliage. The flowering period is irregular, almost throughout the year. The tree often produces regetative buds after the first few showers

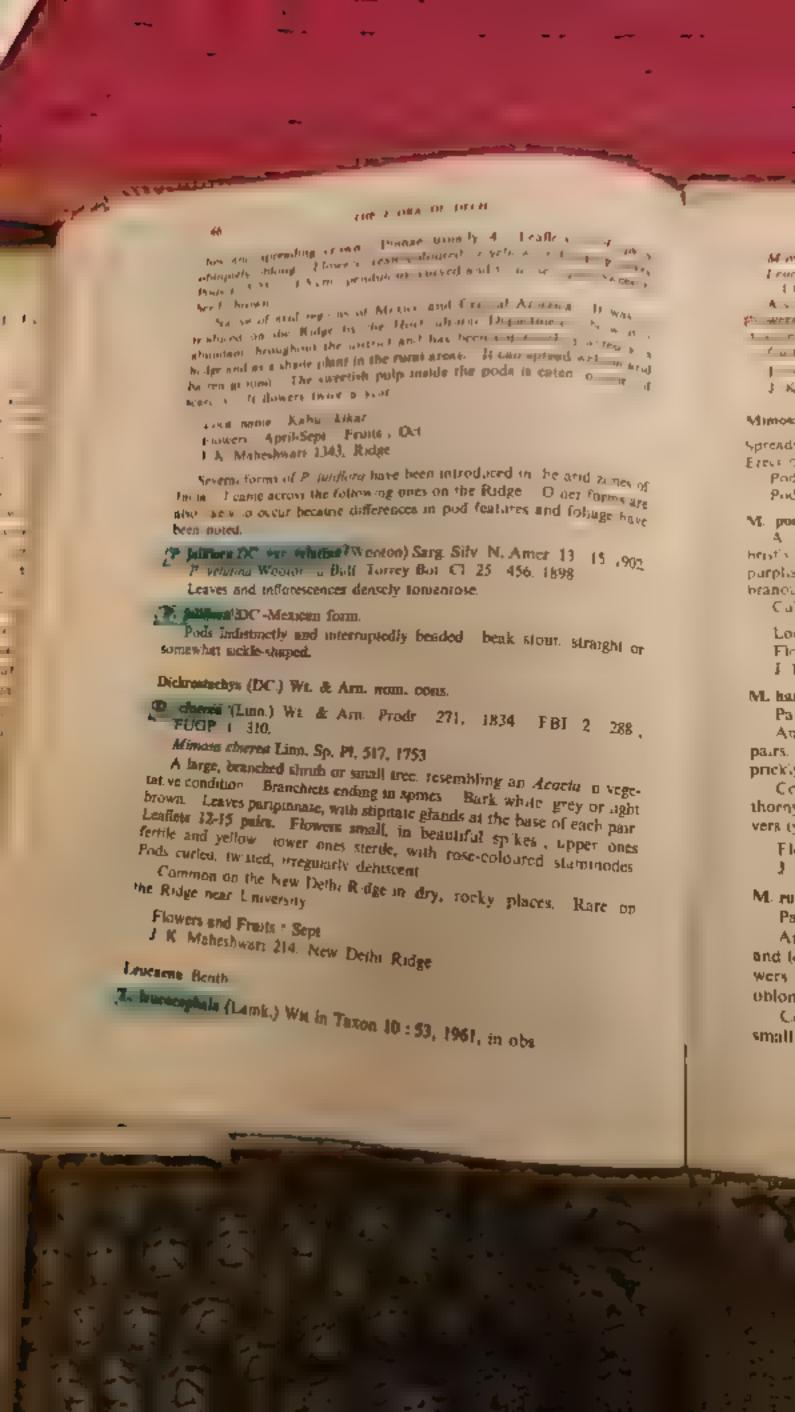


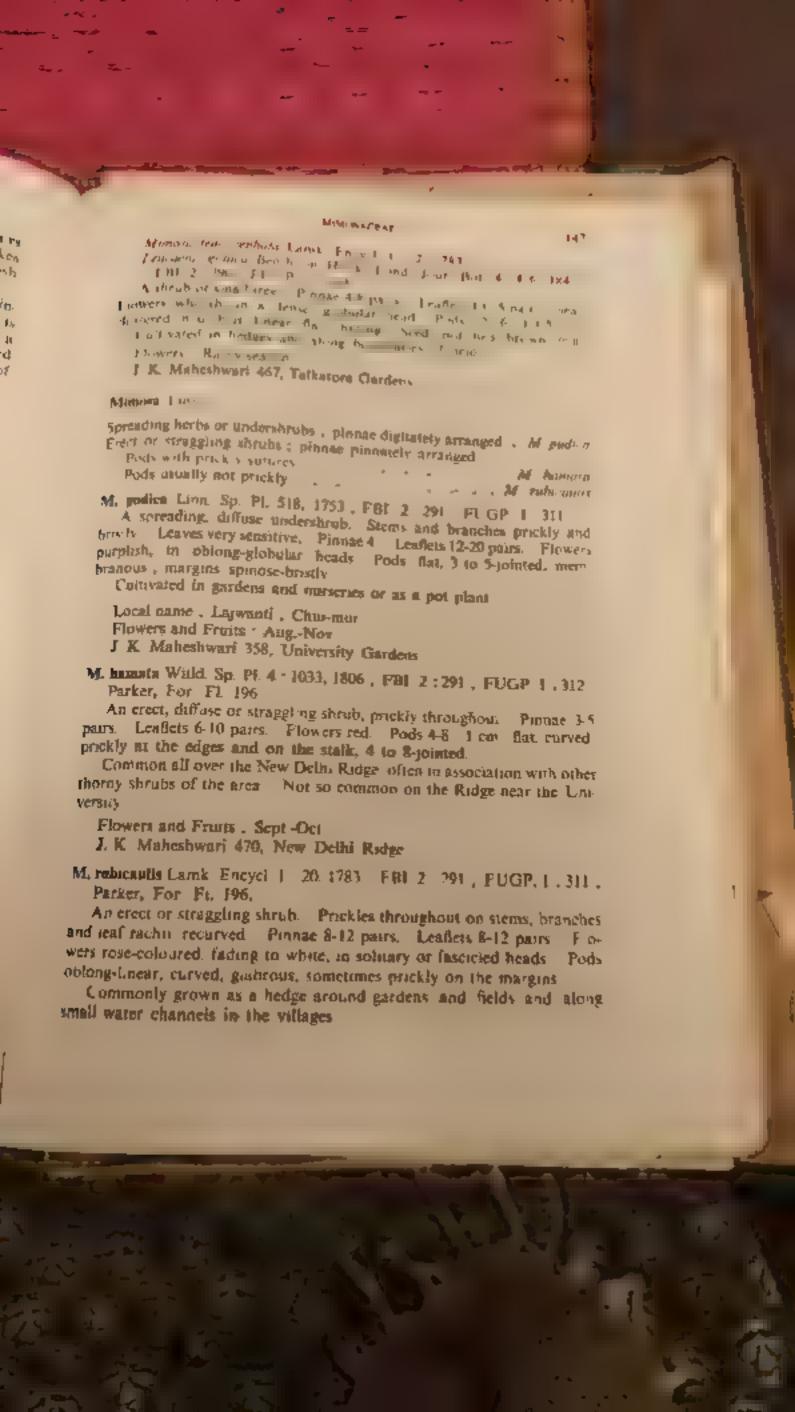


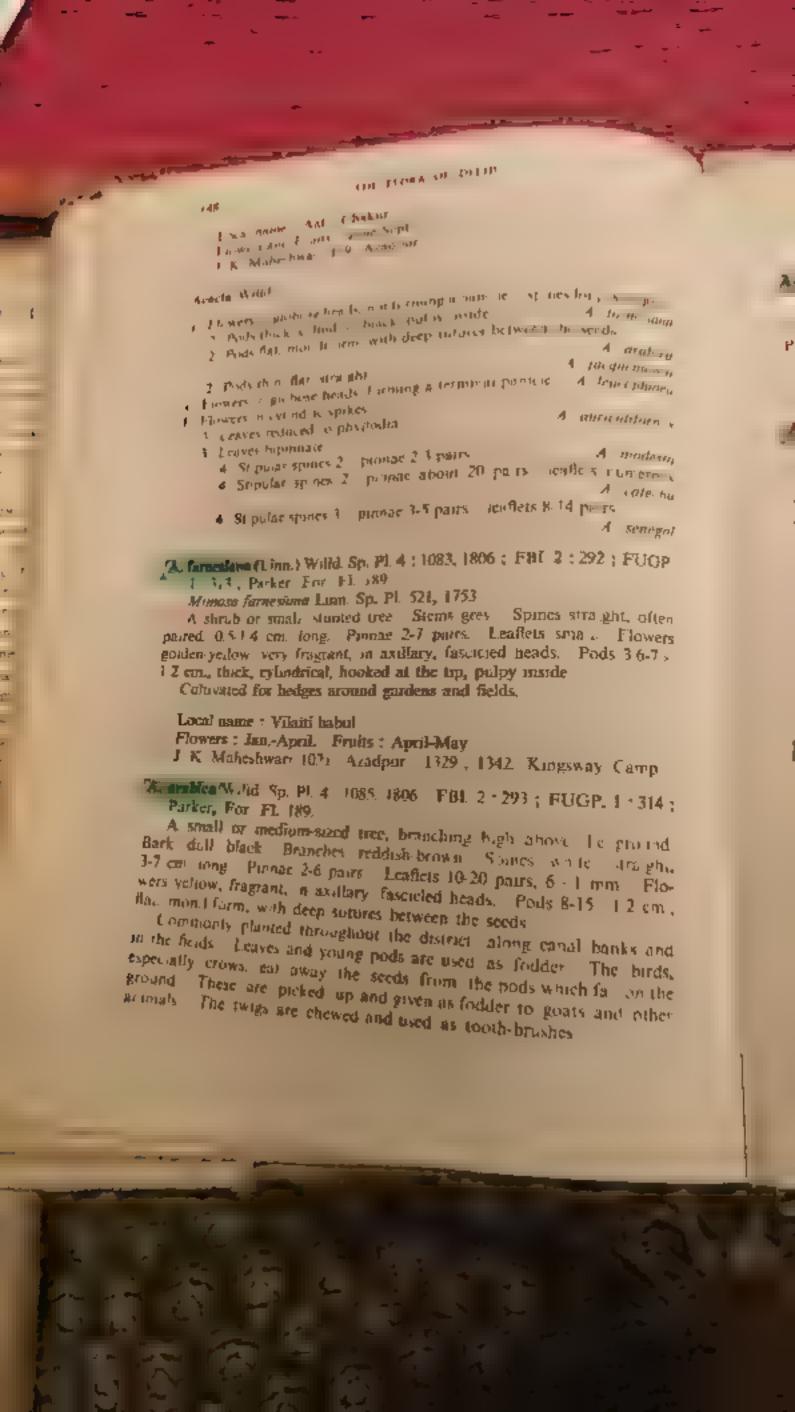


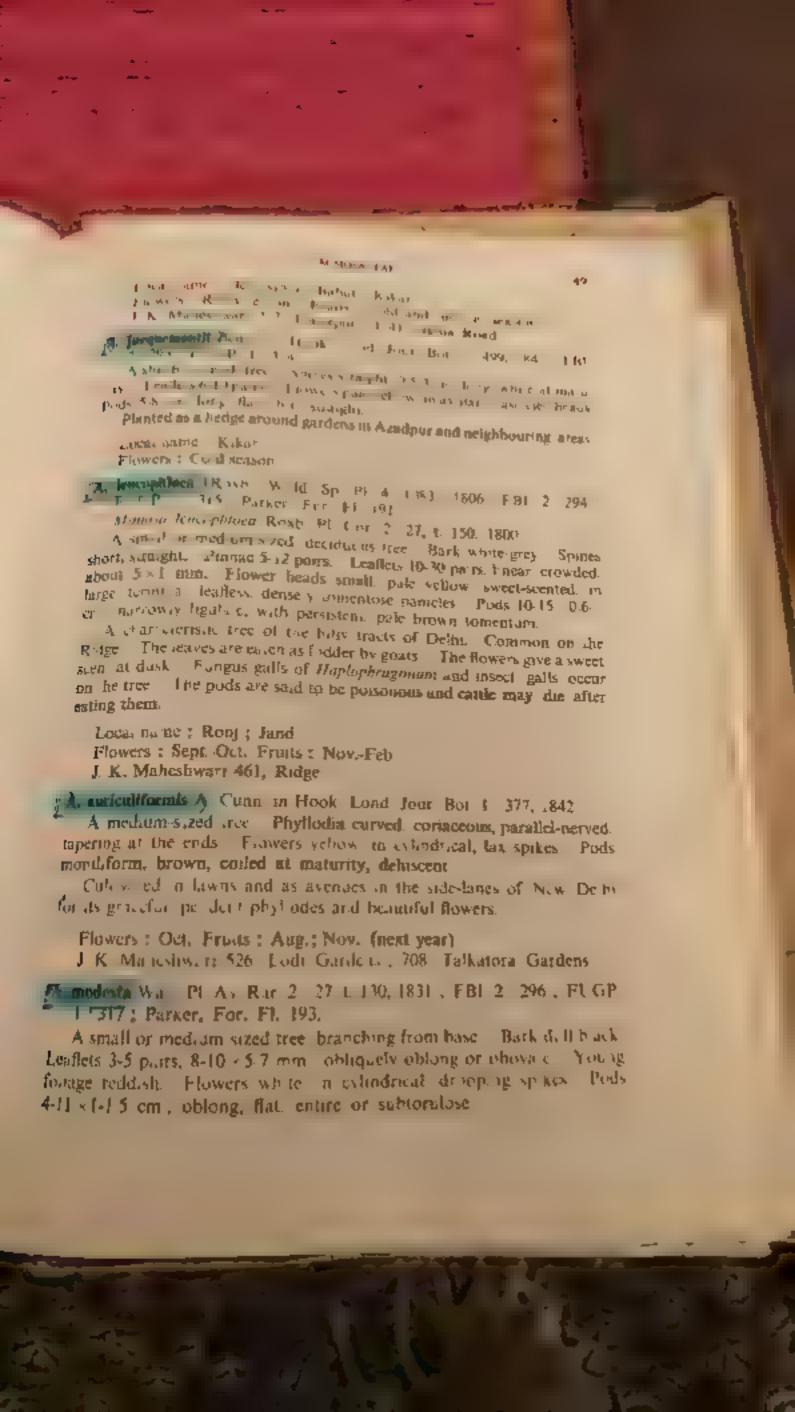
J.K. Maheshwari 1426, Old Delhi Ridge

P. Juliflord (Sw.) DC Prode 2 447, 1825 Parker, For F1 200 Mimosa Juliflora Sw. Prodr. 85, 1788 A small or moderate-sized, drought-resistant tree with drooping bran-



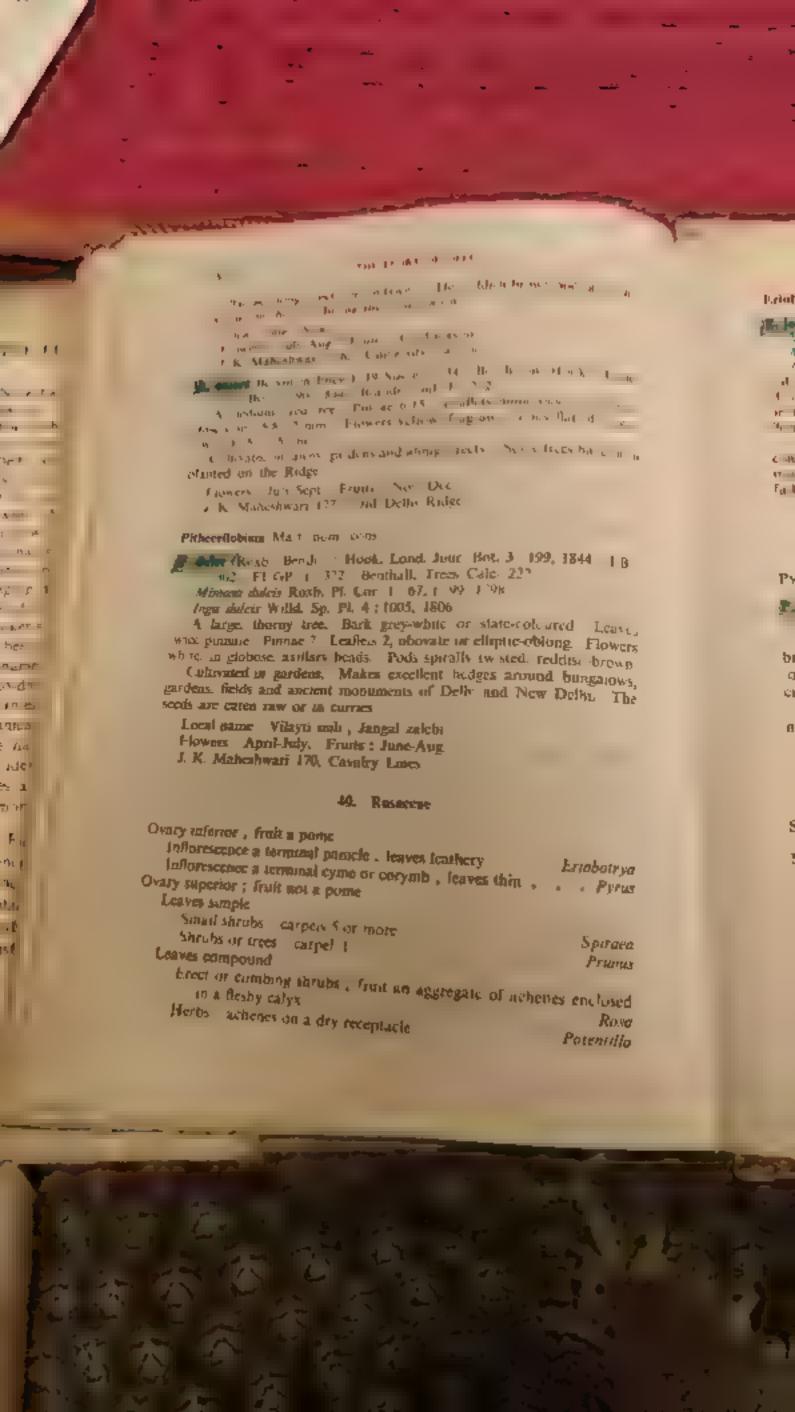


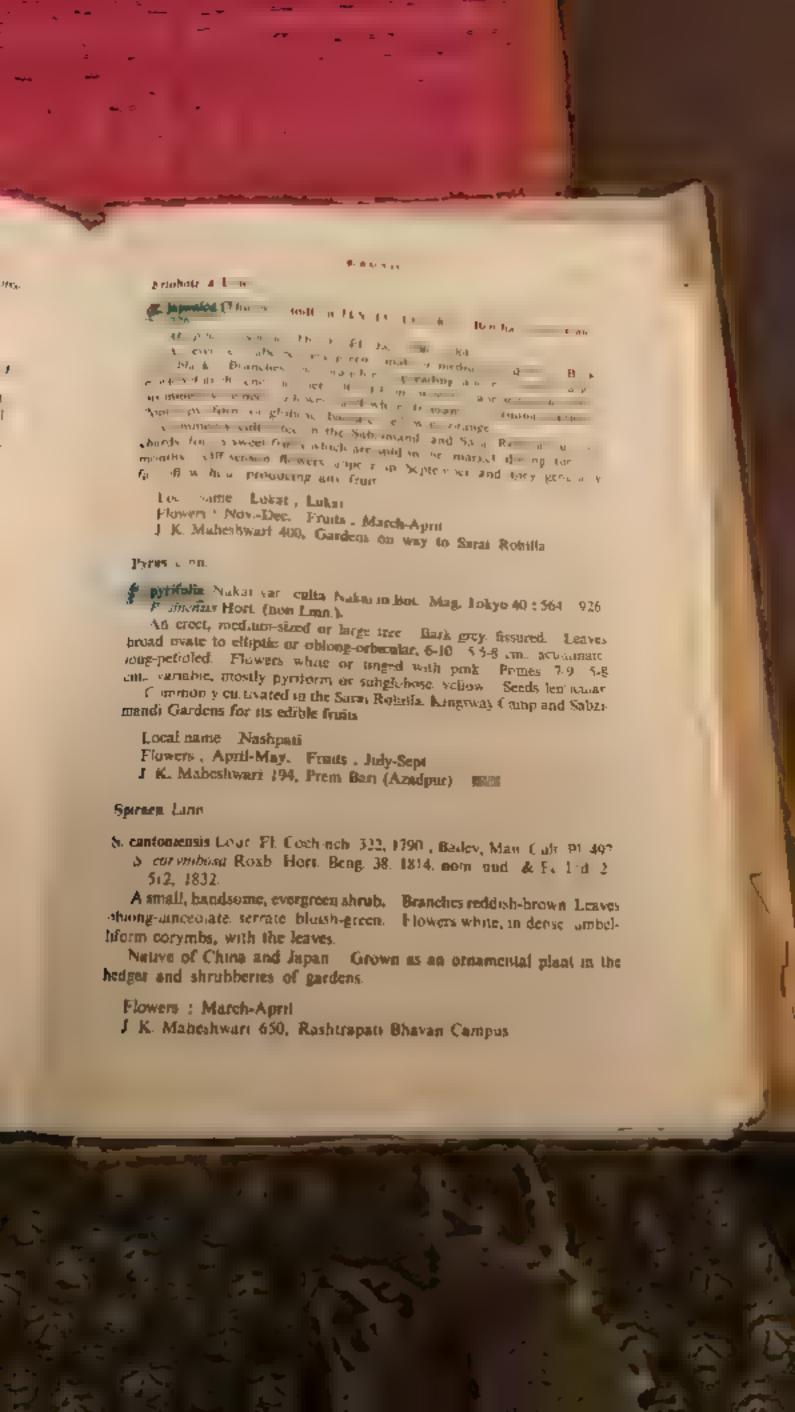


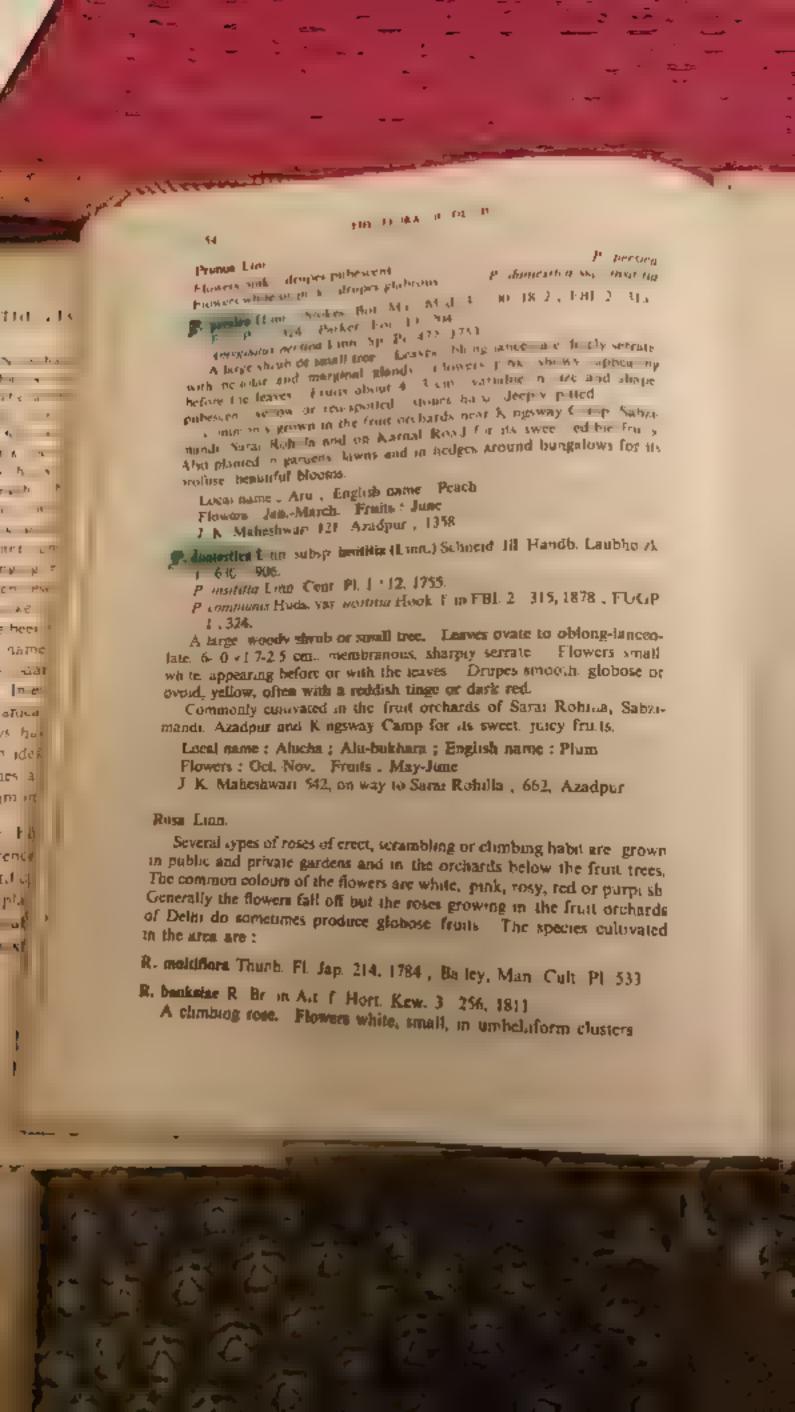


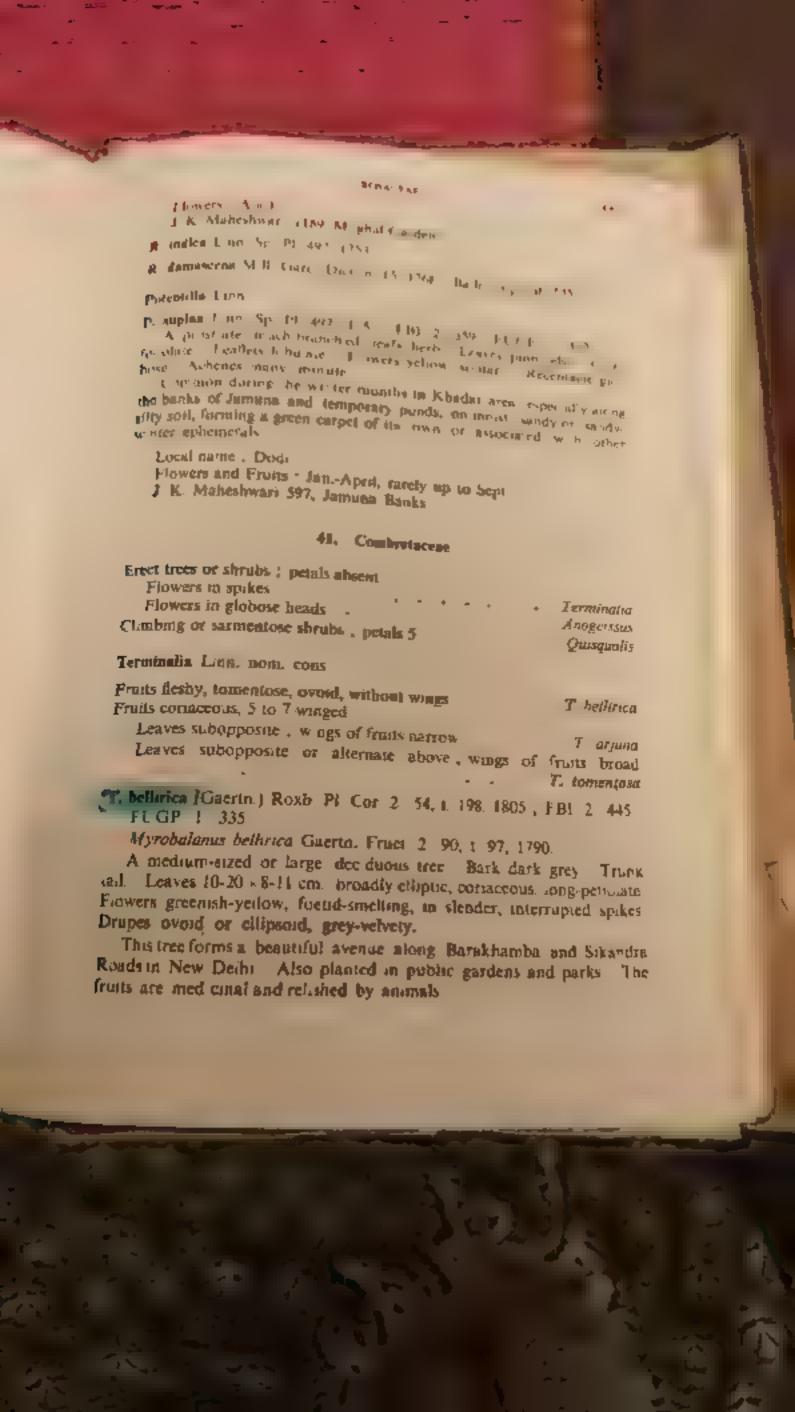
THE CORP OF HERE on ment in any near he had the same to the same of the Road present despect of leach t with hite had bester I the Lund same Chitak J & Mahrehad . A Sea th h Hulet Desirable N. that Sp. Pl. 4, 10 th, 1994, 101 2, 295 P. 1 1 1 2 weak to thack given a to be such to the up of weather to have been parted burnled for the following the second of the name Leader america t Limit I were that outpless in vients a note Leader while Capant factor towards pale bows bus 4.25 cm. long. sin.ked, torulose, debiscent dark british F and in the billy tracts of Delhi, especially on he Redge German less commonly on the Ridge as compared to other species of Arming Differs from the closely alfied A chandra (Road.) Willd., by its pube seen tenf rechts, catyx and corolla Flowers and Fruits July-Aug J K Maheshwari 181 New Delhi R dge worst Wild Sp Pl. 4 1077 1806, FBI 2 795, HUGP 1 3 7 and tree branching from near the base. Trunk greyish velow • A 74.50 .74 1 Spines usually in threes, hooked or straight. Pinnac 3-S pairs. Leaflets L 8-14 pairs. Flowers white fragrant, fading to dull yellow in cylindrica, 0 5-12 cm long spikes Pods 5-9 2-2.5 cm, dehiscent flat, straight 4 grey. Seeds brown, orbicular THE Common throughout the Ridge. 20.00 Flowers July Sept Fruits Post-monsoon and coad seasons 100 J. K. Maheshwari 1122, Ridge lea The following species were collected by W. R. Mustoe, Superintendent . 4 Gove Horticultural Department, Dedu, and sent to Forest Research 1.6 Institute Herbarium. Dehra Dun. I have not come across them during а. my collection traps, . 6 A. polyacantha Willd. Sp. Pl. 4: 1079, 1806. h Caller F A nana Buch.-Ham. ex Voigt, Hort Suburb. Cale 260, 1845, FB1 2 294 Locality: Deibi Ridge, cultivated Collector Mustoc, 1924 ı i A. ferruginea DC Prodr 2.458, 1825, FB1 2.295 ųř Locality : Ridge, cultivated Collector Parker, Feb 1923, Mustoe, 1924

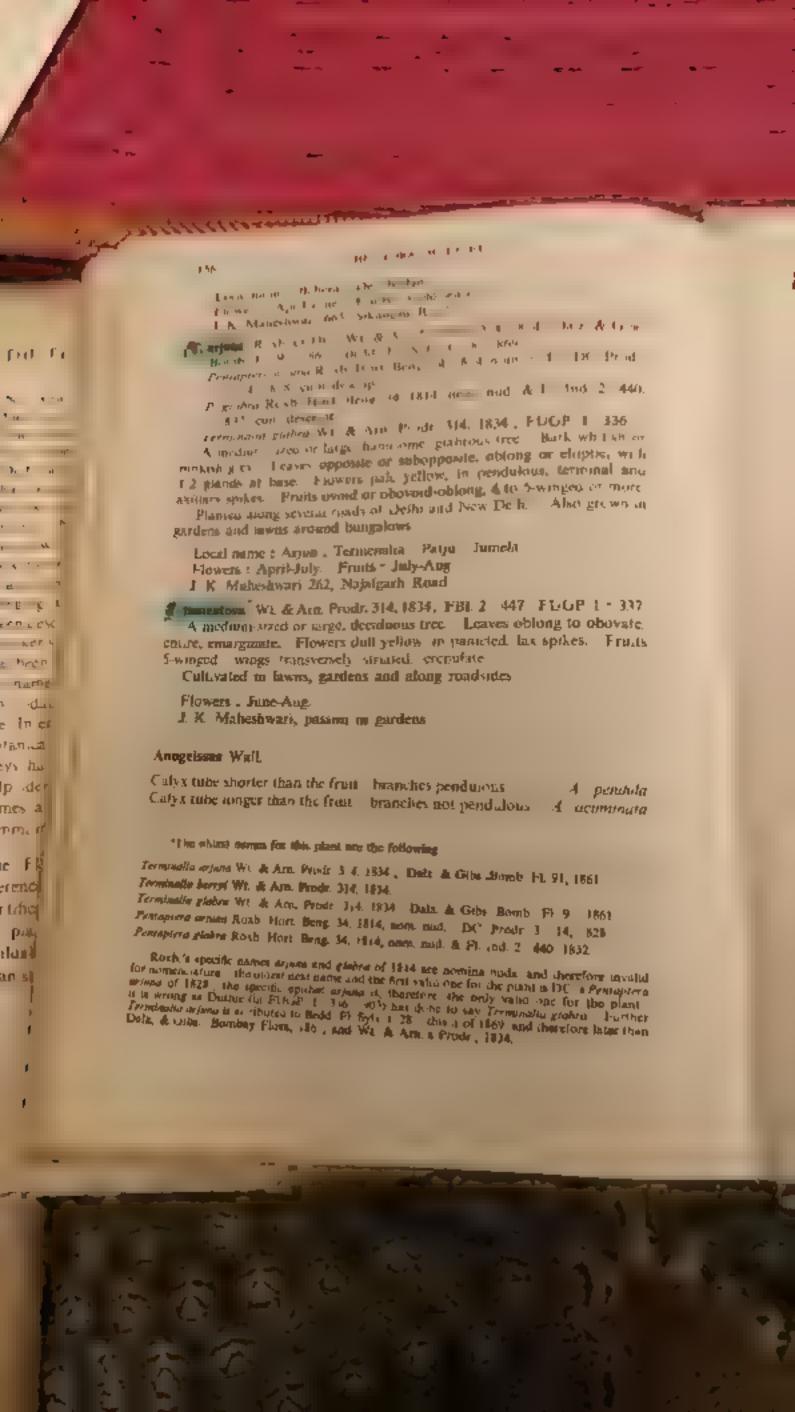
Sh oppor SHOW IN COURSE -alb rgs. 11 Linux ich ich ich call cyter Alist z New z z torrida Wern sp. Pr. d. - Br. RON. to De r Rays and order qual Parket I ( 1 ) Sheeter 19 4 Albinete Dura pods are is a red Howers at a ked pouls in an real abrever, flowers schalle Midrib of leaflets nearer the upper cage 4 tristing Middle of teather he rathe lower edge pages recolable are with flowers shortly pedicelled modals of traffets contra A odoratistima A process ( tehbook (c.com ) Benth in Blook Lond Jour Bot 3 87 ,844 4 amore 1 Bl 2 298 FI CP 1 320 , Parker For FL 186 Mimoss lebbeck Lmn. Sp. Pt. 516, 1753 A medium-sized or large dec duras tree. Trunk grey. Leaves partpannate with a range gland at base. Pionae 2-3 pairs. Leaflets 5-10 pairs. 3-5 s., 5-2 cm. Flowers pale yellow, scented, in heads. Pods 10-30 × 3-5 cm, straw-coloured, with pule brown patches, flat dry Commonly planted in avenues on the Bhagwandas and Shahdara Rosas In reduced on the Ridge where it flowers and fruits. Local name: Strat-Flowers: April-July. Fruits. Sept. J K. Maheshwari 233 A. odoratissidia (Linn. f.) Benth, in Hook Lond Jour Bot, 3 188, 844 FBI 2 299 , FUGP 321 Parker, For Fl. 185. Munose odoratissima Luna, f. Suppl. 437, 1781 A tail, creet tree Bark dark grey Leaves bipinnate. Pinnae 3-4 pairs. Leaflets 8-20, midrib near the upper edge. Flowers yellow shwhite. Pods 16-20 - 2.5 cm., thin, flexible, reddish-brown. Cultivated along the roadsides Local name : Sins Fruits: Nov. Managers Roxb ) Benth in Hook Load. Jour Bot 3 89, 1844 FBI 2 ' 299 , FUGP. 1 : 321 ; Parker, For. Fl. 187. Mimosa procera Roxb. Pl. Cor. 2:12, 1-121, 1799. A tall tree. Bark ye, lowish- or greentsh-white. Leaves b propose, with a large gland at the base. Pinnae 2-6 pairs. Flowers velowish-White, in small heads. | Pods 10-20 - 1 8 cm , reddish-brown, shimng

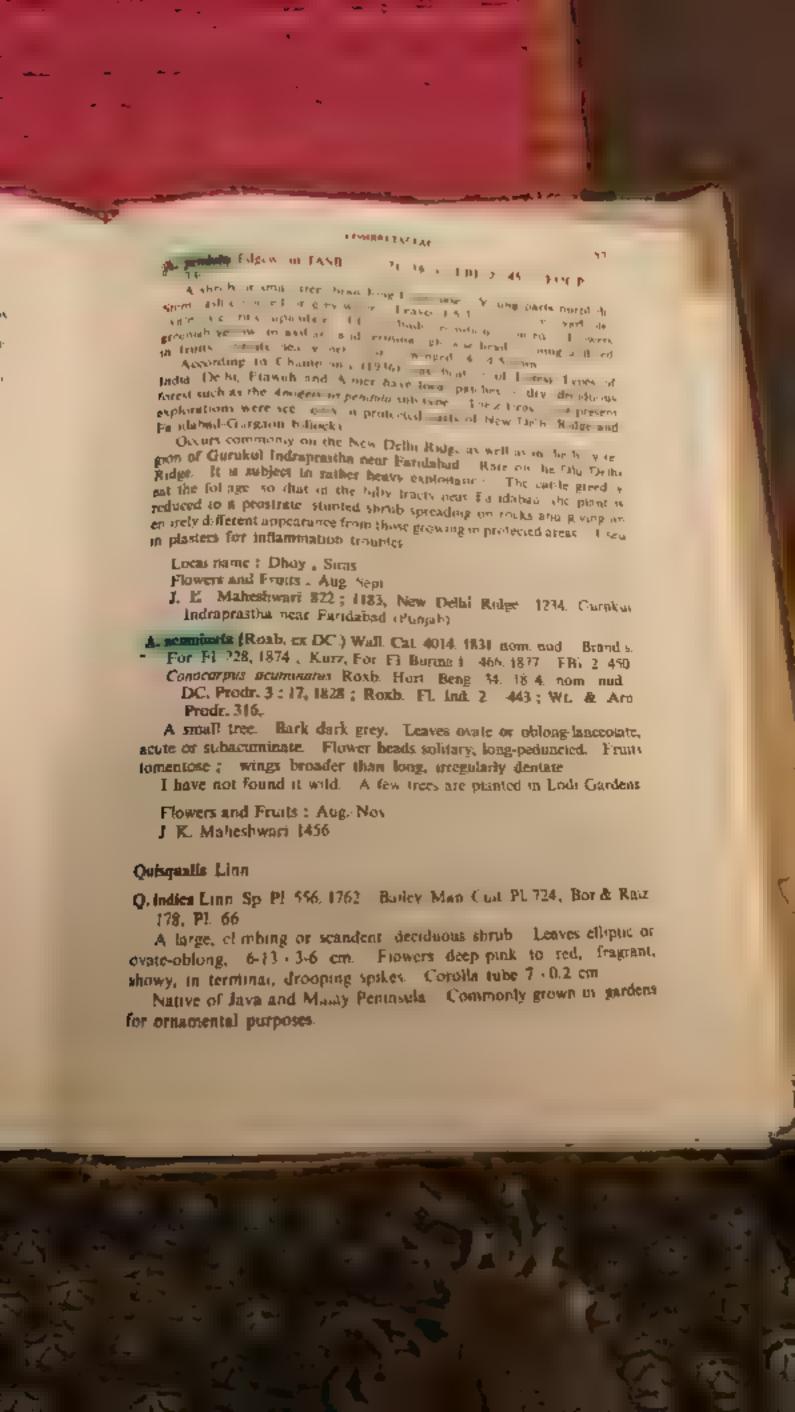


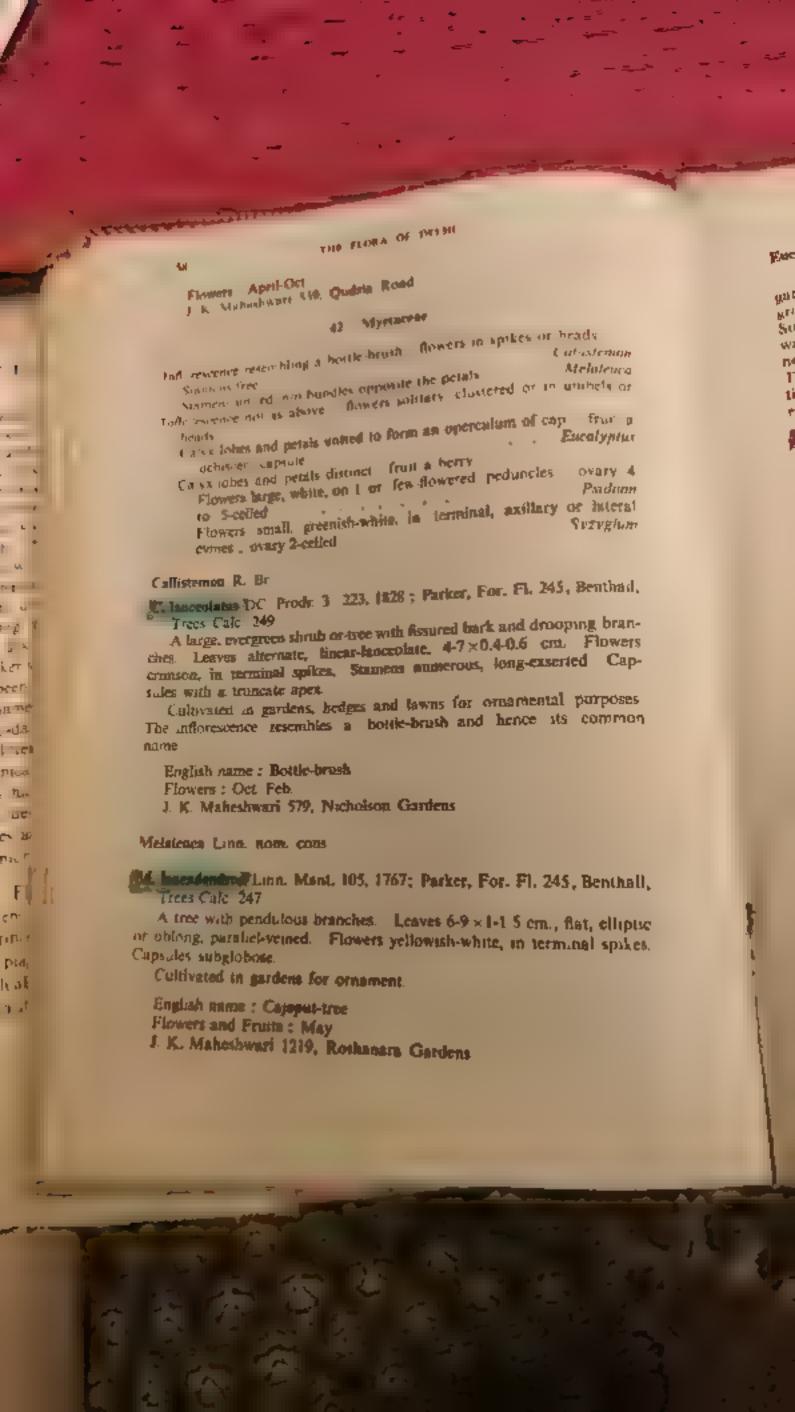


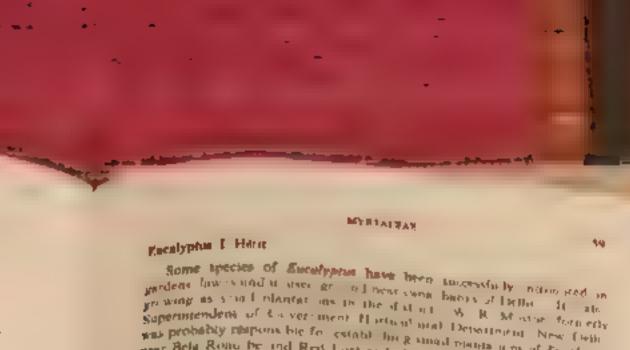












supported by chipmen big for extent the R single relation is not if for deposit pear Rela Rono be and Red Lort and also near tel a Water Reservoir The Help Paperation can be seen even today and the wood a used as where The spaces are used as flavouring apents and kept in books to repel insects. The following species are cultivated in the area

E. globulus | abill, Voy. 1 . 153, t 13, 1800 ; Parker, For F3, 250 , Bailey,

Bark peeing in long stops or sheets. Trunk smooth A fall fee greyish or blash white. Leaves tanceolate. Flowers large 1.3 igether on axi's. Operculum depresses hemisphenic abrupity pointed

J. terenkoroin Sm. Bot. N. Holl. 41, 1793 Parker, For Fl 25. Balley

A tall tree. Bark grey, peeling in thin layers. Flowers 4-8 together in an umbel. Oper ulam constal acuminate 2-4 times longer than calya sube

2. chriodorn Hock, in Mrich, Jour. Trop. Aust. 235, 1848, Benthall. Trees Calc. 246.

A tail, handsome tree. Bark shining, whitish or reddish-grey. Flowers m short panieles. Operentum double, maer transparent, outer hemispheric, pointed.

Te puniculate Sm in TLS 3 287 1797. Parker, Far F1 248 A fall or medium-sized tree. Back hard, persistent, deeply fissured grey-brown. Leaves lanceolate, acuminate Flowers in panicles. Operculum variable. Fruits truncate-ovaic-

camaldulensis Dehnh Cat. Pl Hort Camald 20, 1832 , Bailey, Man Cult P1 728

E rostrata Schl. in Linnaes 20 655, 1847 Parker For Fl. 251 A tall tree Hark ashy-grey or white. Flowers in latera or supraaxiliary umbels, solitary or in few-flowered pedencies. Operculum hem spheric, sharply beaked.

I milit Endl. in Enum. Pl. Hueg. 49, 1837. Parker, For Fl. 249. Bailey.

A tall tree. Back rough, grey-persistent. Leaves ovare to narrow Isnocolate Flowers 4-8 together, in a peduncled umbel. Operculum concal, not beaked, about as long as ealyx tube. Fruits broadly turbinate

Flowers: July-Sept.



J K Maheshware 281

Young branchiers 4-angled : veins of leaves conspicuously impressed

shove and raised before Young branchiers terete verns of leaves not

P contempor

prominent

P. antiere Linn. Sp. P) 470, 1753 ; Parker, For, Fl. 245, Bentnatt, Tire,

Calc. 244.
4 - Proof which & rib to medium sized free. Back scaly, be ownered

Work rade a brown Leaves corraceous, ablong elliptic the same beauty more reach impressed above. Flowers white, about 2.5 cm. in dram, Tries go bene ovoid or pyriform, yellow with white or deep pink pu s

In reduced Grown is all the front orchards of De hi for its ed ha

that which is sold extensively in the market

Local name : Amrond

Flowers and Fruits: July-Sept

J & Maheshwari 227 Karnal Road Gardens . 417 Uzirpur G., den,

P cattletanum Sabine in Trans. Hort. Sec. Lond. 4, 317, 1, 11, 1825. Bailey, op. cit. 729.

A bushy shrub with grey-brown back. Leaves obovate to explic thick leathery the veins not prominently impressed. Flowers while Fruit above, purplish-red.

Introduced. There are some plants in the shrubbery of Government

Sunder Nursery that produce flowers and fruits.

Local name Japani amrood Flowers : July

J. K. Moheshwari 1124, Sunder Nursery

Syzygiam Geertn, norn, cons

S. cumini (Linn , Skeels in U.S. Dept. Agric, Bur, Pl. Ind. Bull No. 248 : 7 912 Benthal , Trees Cale 242, Santapan in RBS1 16(1) 105, 1951 Myerus cumini Lina. Sp. Pl. 471, 1753. Eugenia jambolana Lamk, Encycl. 3:198, 1789; FBI. 2.499

Syzygum jambolanum DC Prodr 3 259, 1828, Gamble, Fl Pres.

A medium-sized or large tree. Bark smooth, grey Leaves 7 5-15 v 5 cm. Panicles lateral, from the scars of fa len leaves. Flowers green, shwhite. Herries ovoid or oblong to ovoid-oblong dark purple, juicy,

Comment y cultivated in the Saturdands Sara R he is hime way Camp and Karnat Road transfers for to first which are ease the an an Camp in a marke. Has been plan ed as a spadarde tree in New John Local name : Jamun

Howem : April-June. Fruits - June-July I K Meheshwari 90, Roshanara Corte .

## 43. Lytheneuge

tes ha Charles on a conpropers regular culve robe it gits y curved convers regular ; onlyx tube straight Lawers tetramerous stamens 8 Flowers hexamerous; stamens indefinite

Account in

Promiter to

Lans and Largerston n. 4

# Ameternia Lann

Leaves narrowed to the base , flowers clustered as the leaf as is people absent A hace try traves subauriou ate at base, flowers in compound staded comes penus bright pink, caducous 4 seneguiensis

A. baccifera Loon Sp. Pl. 120, 1753 . FBI 2 569 . FUGD 1 350 An erect, glabrous herb in marshes. Stems and tranches angular purplish. Leaves opposite narrowed to the base. Flowers in condensed axiliary racemes or clusters. Capsules red when ripe, glabrous

Common in moist, sandy places and along canal banks, often associated

with marshy sedges.

Flowers and Fruits: June-Oct., also in Jan. J. K. Maheshwari 1068, Karnal Road

A. senegalensis Lamk Tabl. Encycl. 1 312, n 155, t 77 f 2, 1791 . FBI 2:570: FUGP. 1:350

An erect, glabrous, branched herb, 20-45 cm. tall Leaves 2 5-5 5 . 0.5-1 cm, oblong. Flowers bright pink in whorled, compound cymes Petals caducous. Capsules small, globose

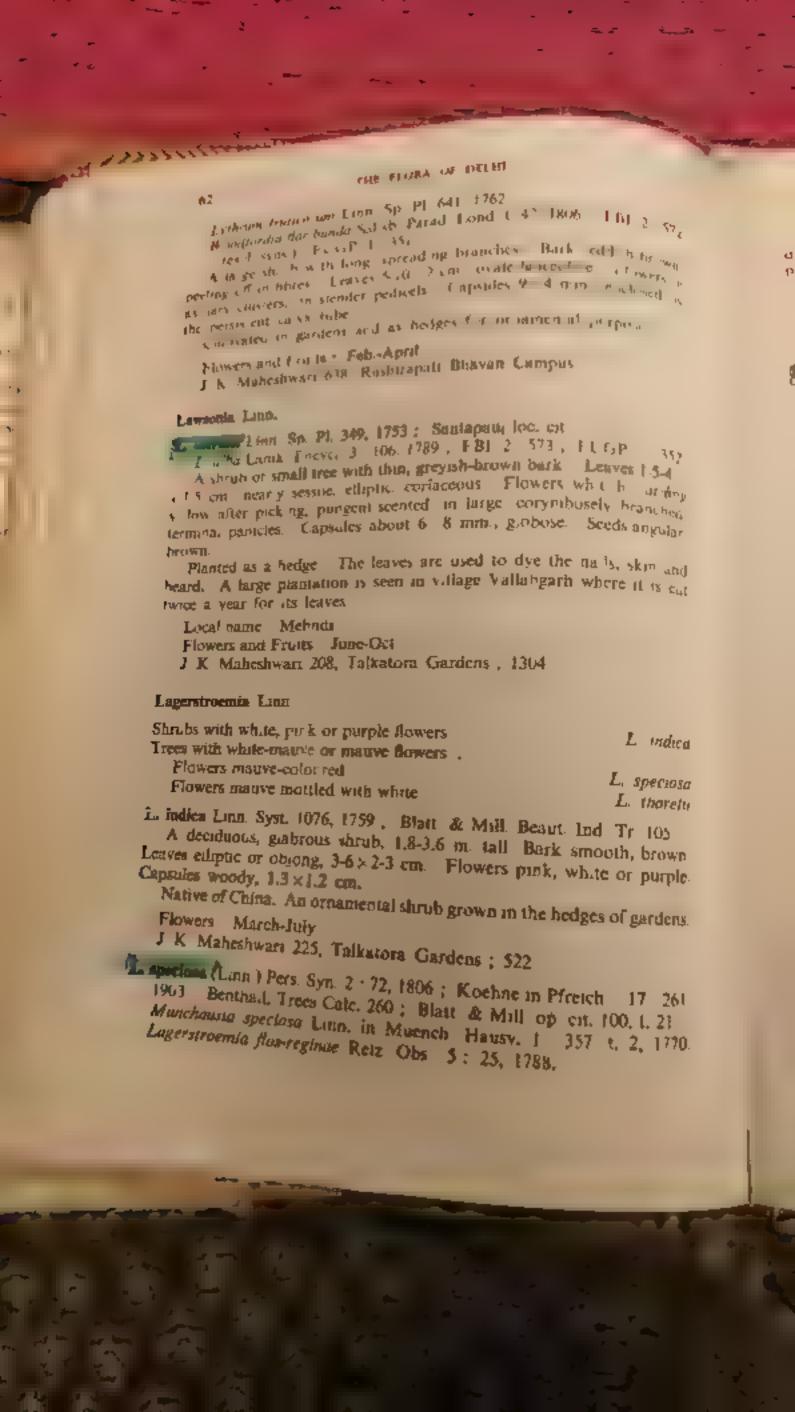
A moisture-loving plant, found along cana: banks on wet, marshy soil

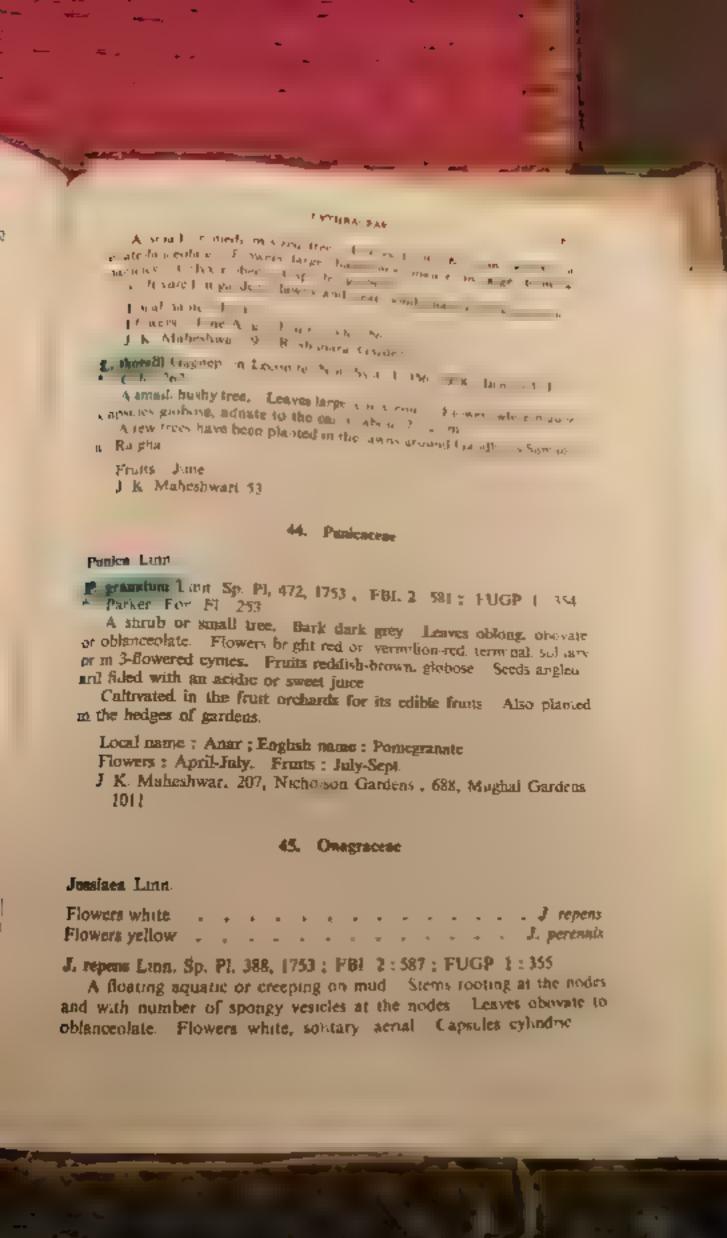
Flowers: Sept.-Oct. J. K. Maheshwari 437, Najafgarh ; 494

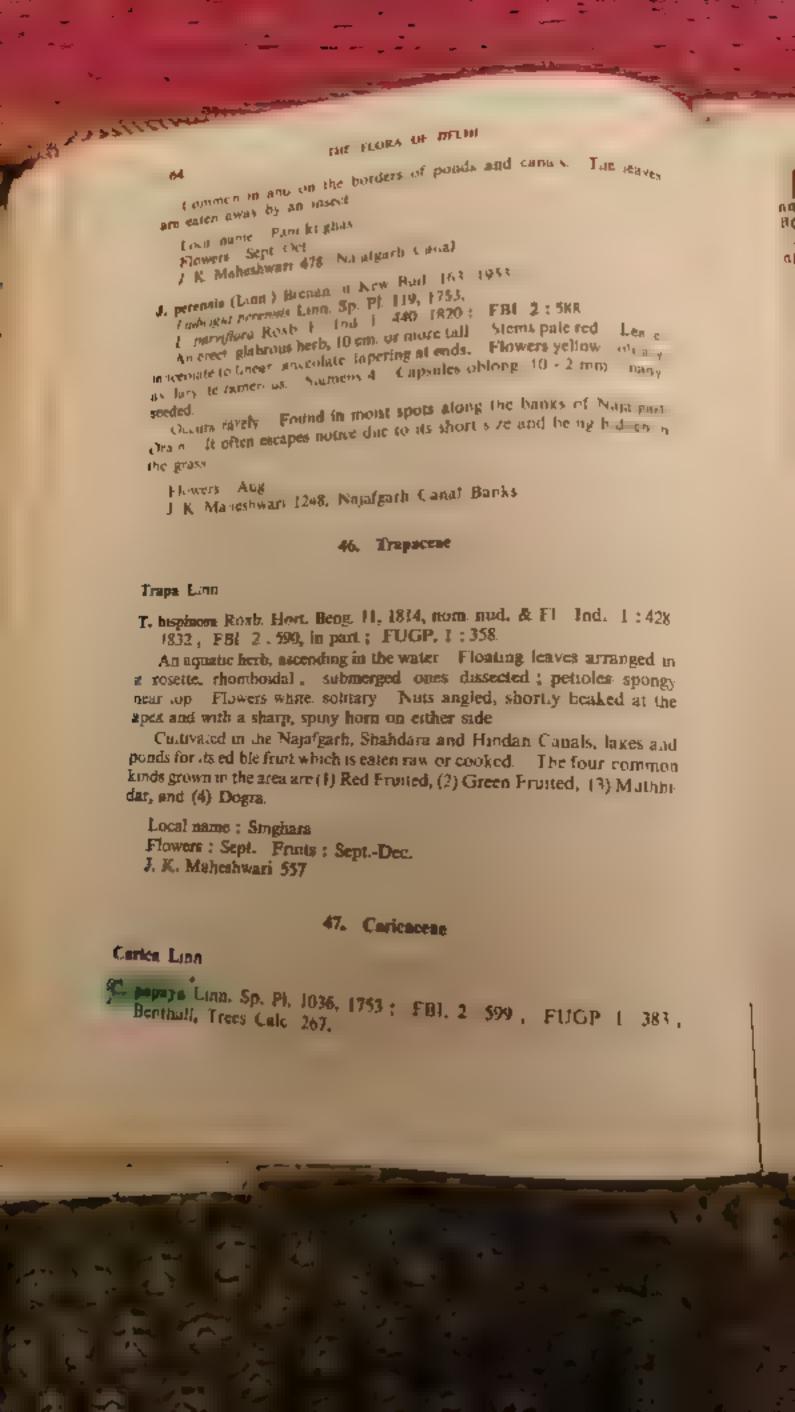
#### Woodfordia Salisb.

W. fruticosa (Linn.) Kurz in JASB, 40 56, 1871; Santapau in RBSI 16(1) ; 114, 1953.



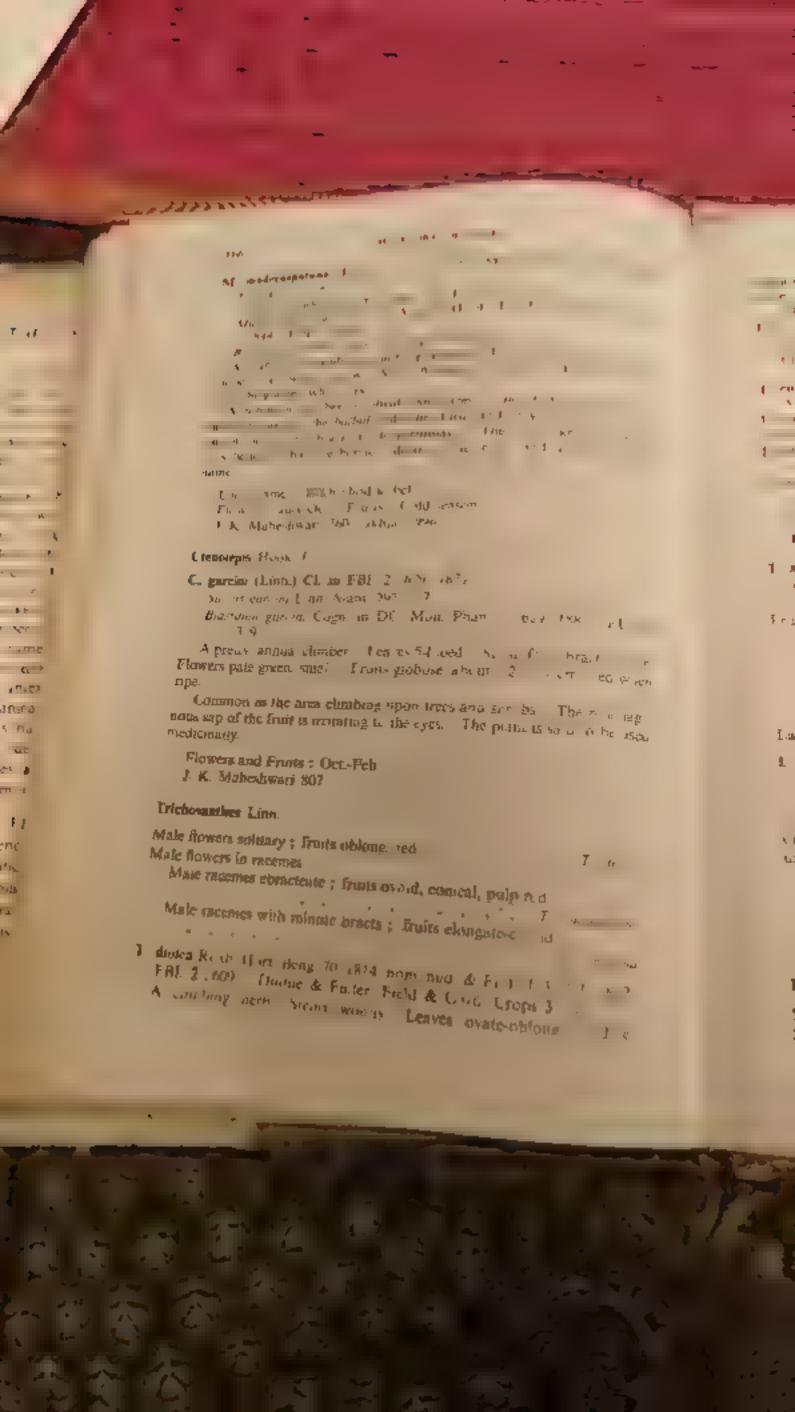


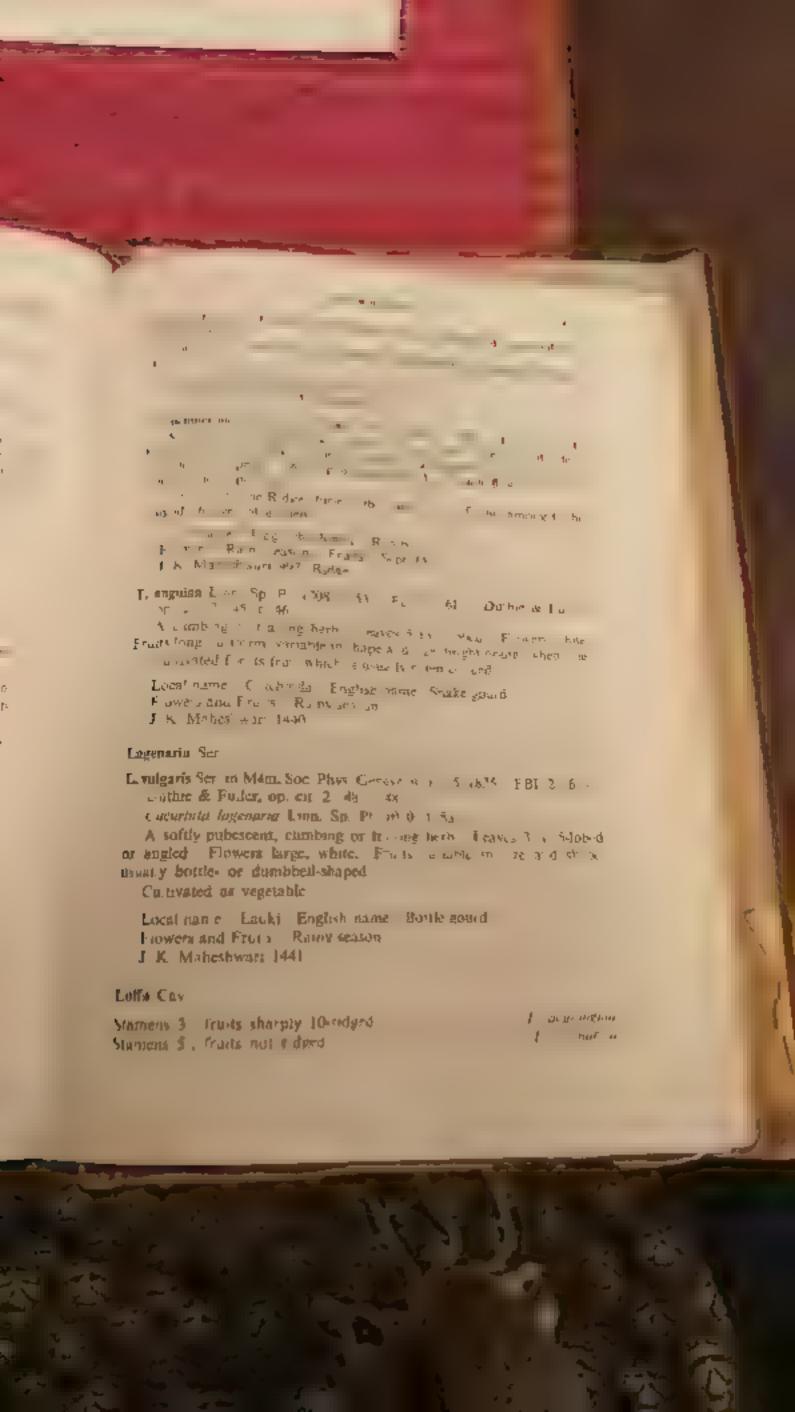




4 cap do it was tree 44 c . . . 16.5 good of the state N metr c all call and and and a No on the last send to the send of short of Arms and d F a wall more Paris forces and easy a second J. R. Mala para e 124 48, Cucurbitacear secretarized gens of his tateful) and grown for the annihilate much used an vegerable, either row or englad done of a real of many months. They are comprisely consisted in soils and along in him. of Jamina River its imbutaries and also a change with and Anther cells straight Style with an annular disc at the base. Style without a disc at the base make with a sup is like of at-Anther cells flexuese or conduplicate -Corolla divided nearly to the base . Petak fimbriate Trichusquihes. Petals entire : Cally's tube of male flowers elongate, anthers included Calyx tube of male flowers short; anthers more or less exserted: Stamens inserted near the mouth of ealyz tube Stammate flowers in racemes; tipe fruit dry Stammate flowers solutary; fruit fleshy Benincusu Stamens inserted below the mouth of calyx tube Stammate flowers solitary or recented, tendrics sample Momorde a Stammate flowers clustered or sol tary, tendruls simple Male and female flowers southry tendrits branched Citrulius Corolla gamopetalous, belt-shaped Tendrils simple; flowers white Cocctina Tendrils branched; flowers yellow Carriet Ist

Melothria Linn.





THE STORAGE PERSON

f acuteografia come first the first A lighter at 4 2 At 1 forg III are Juneau & Labor & 4 7 60

Chestal statistica in Later 24 (A. 101) 23 to remark you to the plan to the first that the Markette the extensives the first bearings of the North Albert Represent

a great

Later and wide

I to the sc I s I we want by Ran Can

J. K. St. reshista 653

I estindence et no Roem. Son Pepon, 63, 1846 , Durhie & Faller p.

Cr 2 66 2 63

Me norma cy infrito Linn. Sp. Pl. 1009, 1753 Lufte acgyptiaca Mill. Gard. Dat. 1768; FBI 2.6.4

timbing of trailing, scabrotts annual. Leaves orbicular-representations. no nes tered or angled. Flowers yer on, male and female from the some axia. Male flowers in painties. Fruits cylindrical or fusi orms obscurely 10-ribbed. Seeds black.

Currence as vegetable and may be seen spreading over bushes of the resports.

Local name: Ghia-torar Flowers and Fruits \* July-Sept J. K. Maheshwari 192, Wazirpur

#### Benincasa Savi

B. Inspide (Thumb) (Sen. in DC Mon. Phan 3 573, 188. Cucurbita hispida Thunb. Fl, Jap. 322, 1784 Benneusa cerifera Savi in Bibl. Ital. 9 158 1818 & Mem Si pra Prant Cocurb e 6, 1818, FBI 2 616 Duthie & Fuller, op CPL 2: 43, & 45.

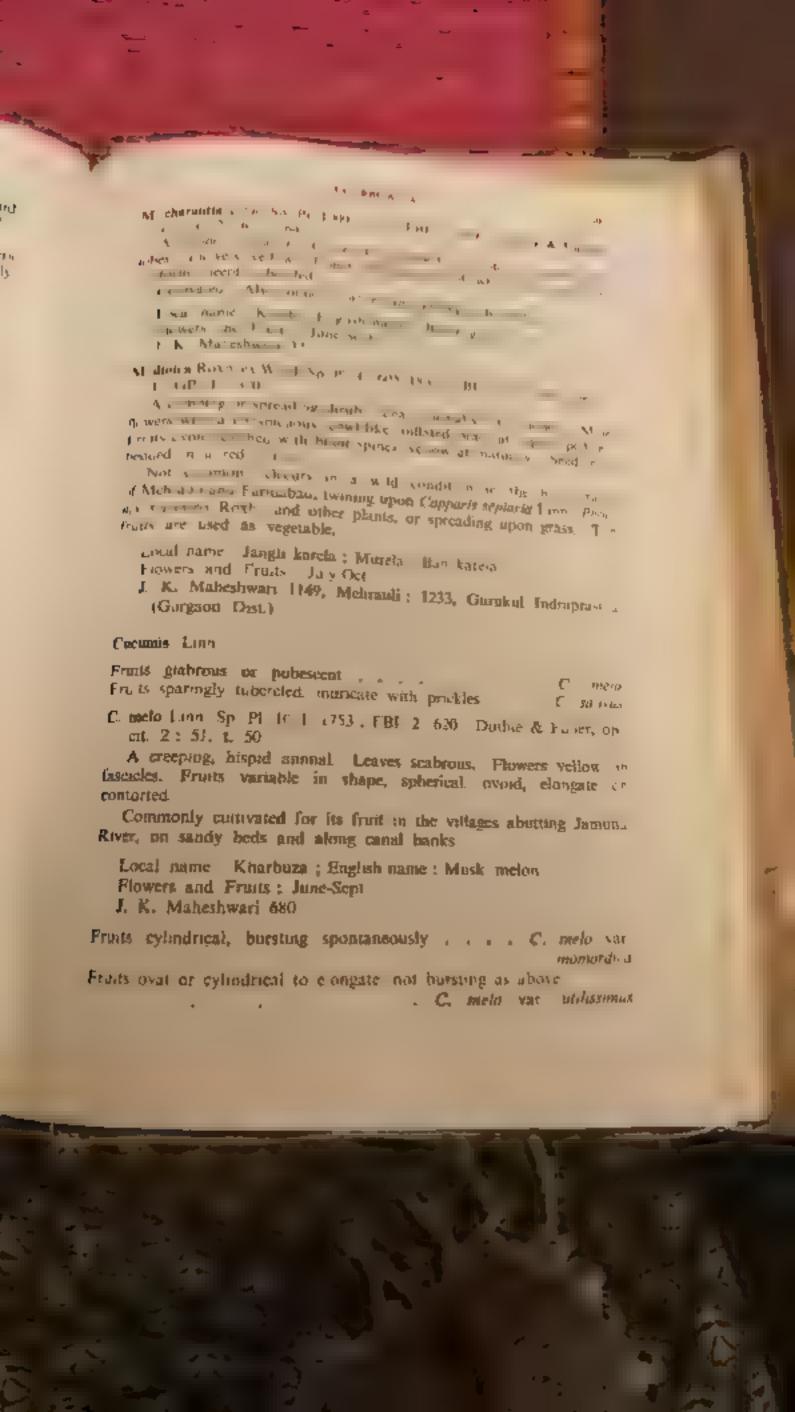
A large combing or trailing gourd. Leaves 5 to 7-tobed, h spid. beneath. Flowers arge yellow From fleshy, broad oh ong or ovoidcyanden, with a wary bloom, flesh white

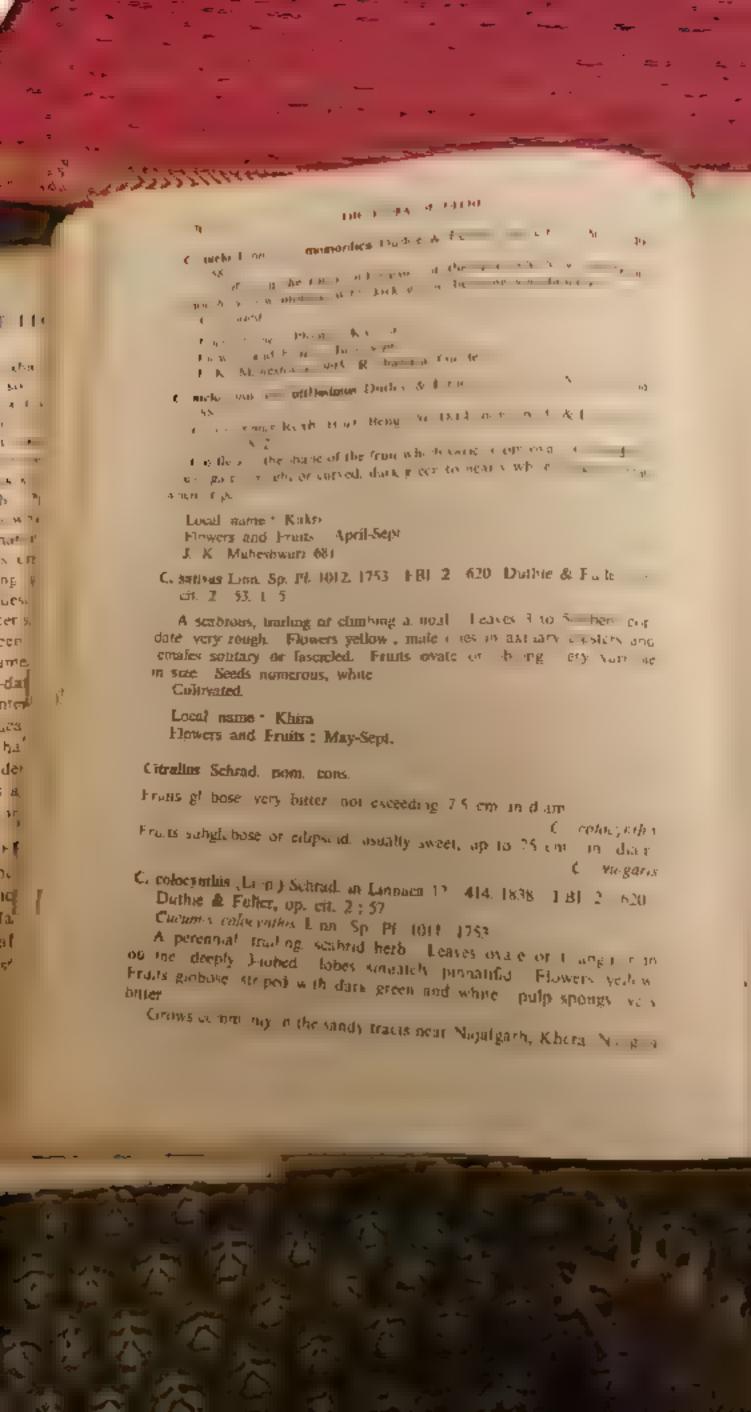
Car vated for its fruit which is easen as vegetable and a so used a the preparation of Pethal by the local confectioners

Loca name Pathy, English name White gourd Figures and I rais Ramy scason

## Momordica Linn

Male and female flowers on same point fronts tubercled. M. charantia Male and female flowers on a flerent plants, fruits spinose. M diolea





en No. 1 enel 6 p of the to-In MI L. I . Avon I K Albe on the kind of the configures Schrad ex to de / se to n D the A hi r up i by u - o one of them of the party A compare the tent of the tent towers to the loss of the party of the last of the las ( I wated for is also and contract or ext on a Transport Father's Erglish rates the For a June July J. K. Maheshwari, 1445. 4 volgaris Schrad, von Betolosus Davine & hallen, 46 42 1581 FUGP 375 Circullus fistulosus Stocks in Hook Aca Jour 2 24 1 3 per Disanguished from the main species by its fix notes arm and netholes. Fruits depressed at each end, held apple green Cultivated. The front is used as pickle and reget by Local name . Tinda ; Tenda Teas: Flowers and Froits . Rainy season J K Maheshwari 678 Coccinla Wt. & Are C. cordifolia (Lina.) Cogn. in DC. Mon. Phan 3: 529-188 Beyonta cordifalla Linn, Sp. Pl. 1012, 1753

C. cordifolia (Lina.) Cogn. in DC. Mon. Phan. 3: 529-188

Bryonia cordifolia Linn. Sp. Pl. 1012, 1753

Coccinia indica Wt. & Arn. Prodr. 347, 1834

Cephulandra indica Naud in Ann. Sc. Nat. (ser. 5) 5: 16, 1866. FB1

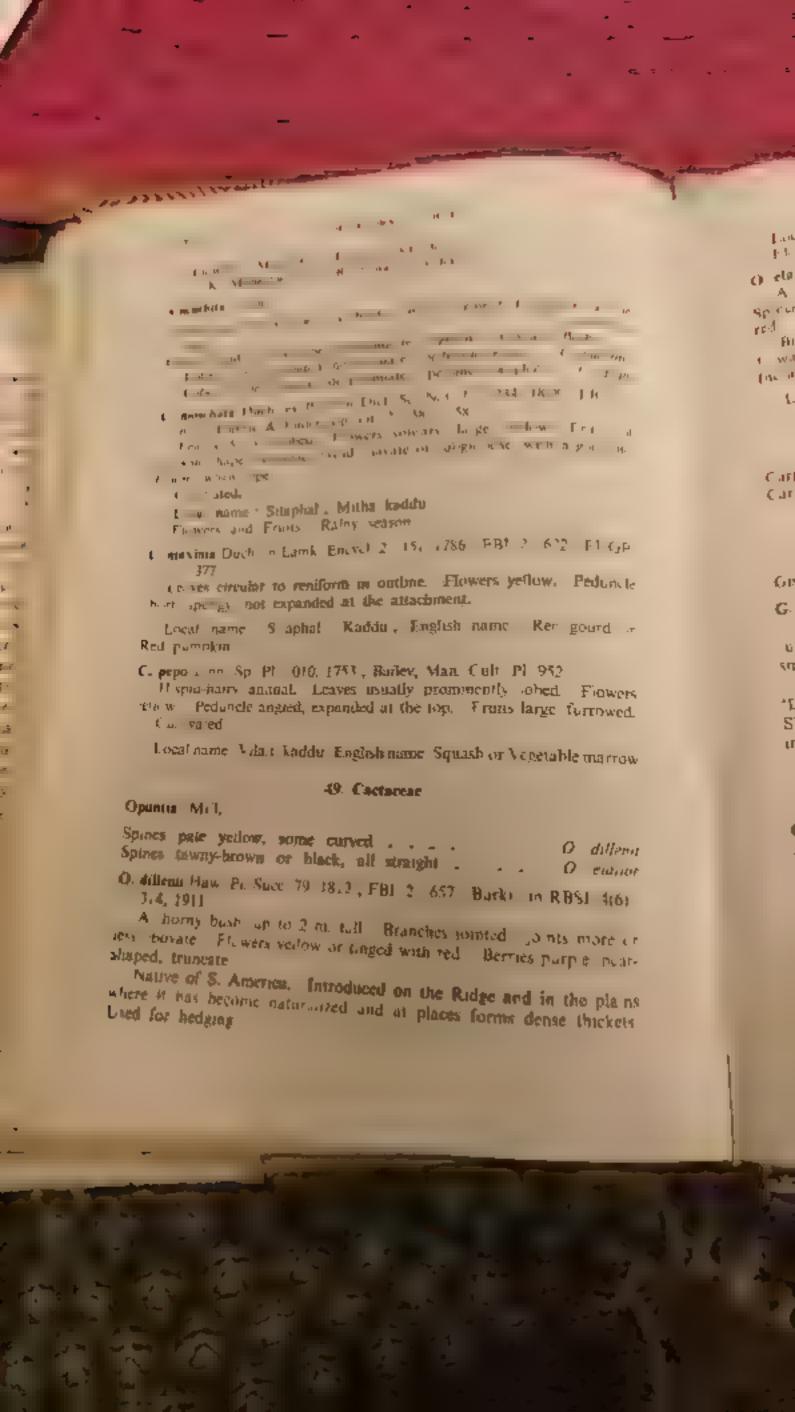
2: 621

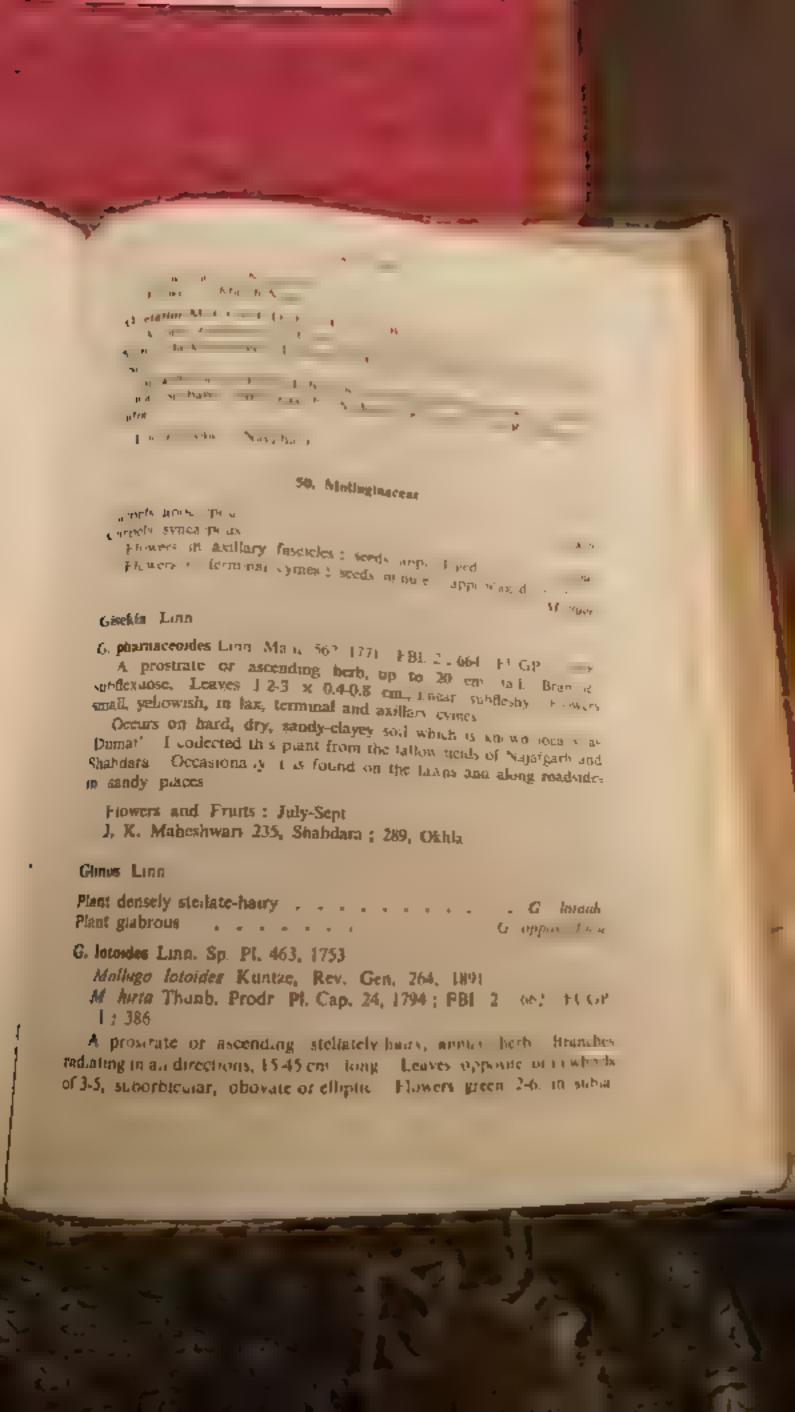
A pretty, twining or spreading shrub. Leaves 3 to 5-lobed or angled cordate shining, margins distantly gland and open blowers white fituits flestly over dier obling bright red when tipe South embedded in red pulp.

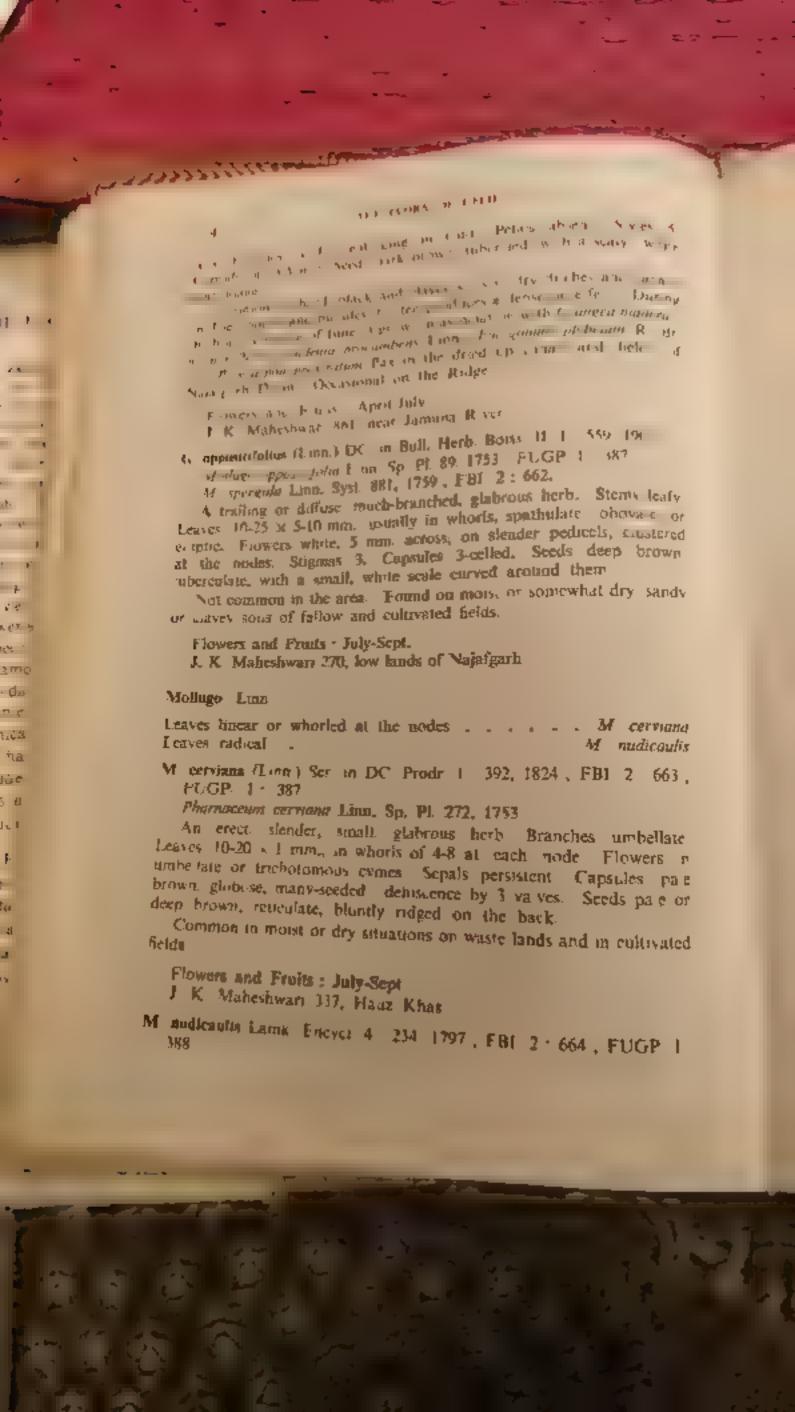
Common throughout spreading or two ng rather size on the trees and all rubs. The green fruits are used in cult ex and some to be useful for diabetes. The ripe fruit is enten as such. Parries a to shakes are said to like it.

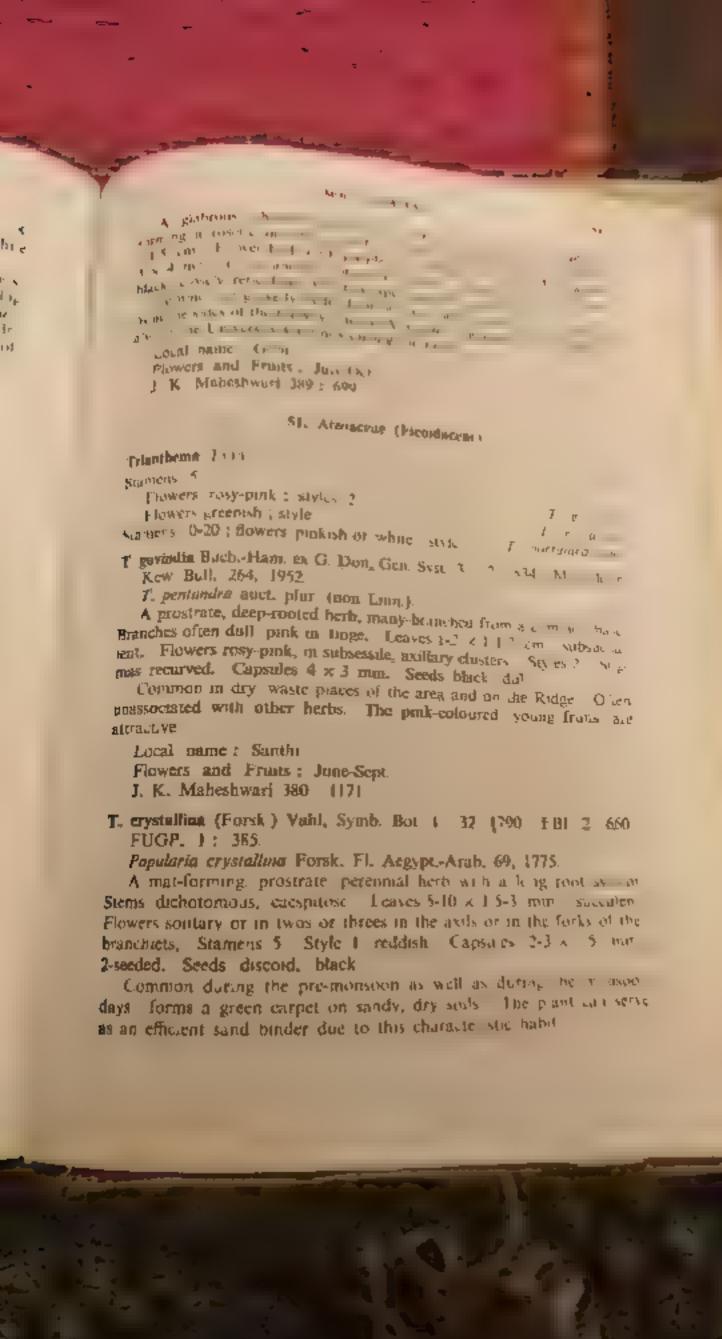
Local name, Kundru Kanduri Kutru Ram kuch va

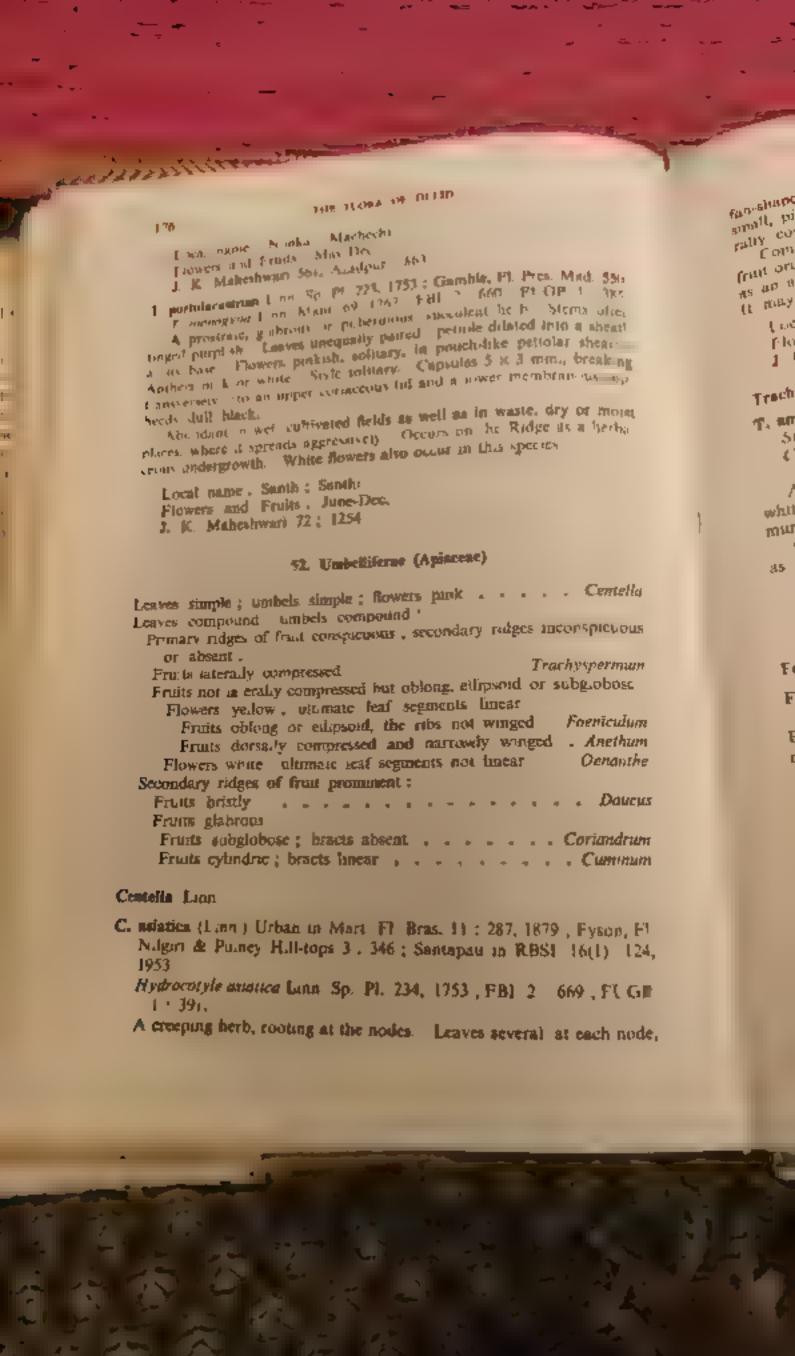












Cam

fruit ore

as up u

It may

L sol

pilo

1

Trach

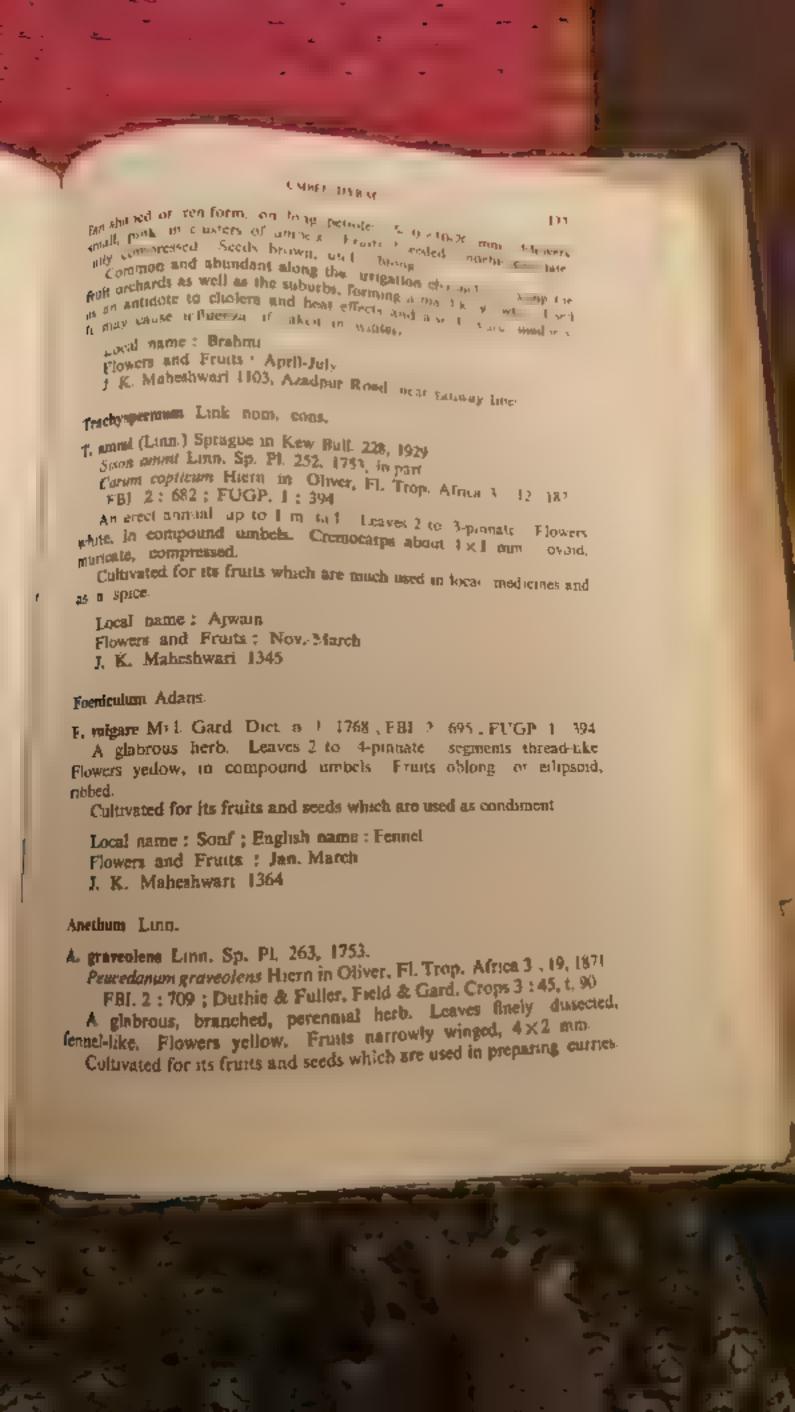
T. un 51

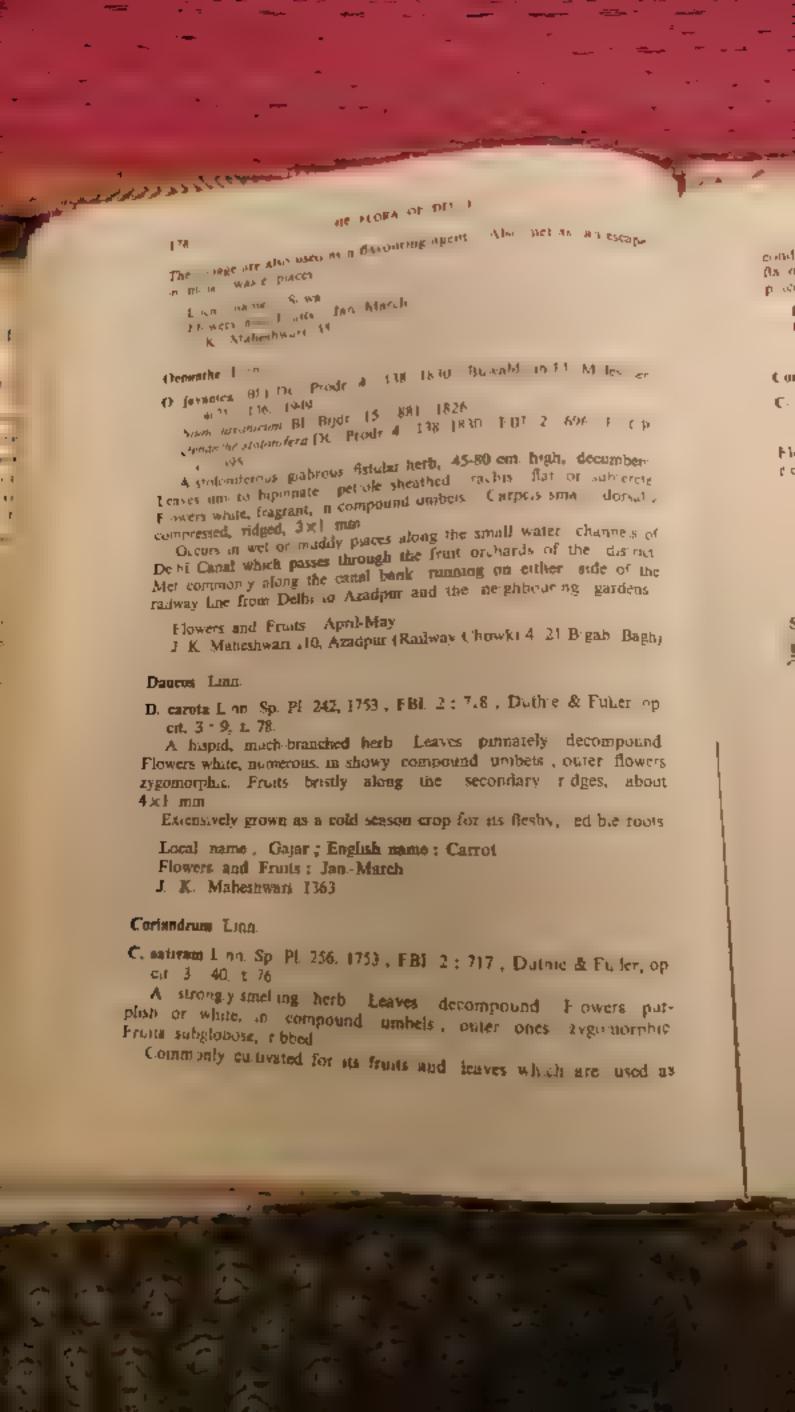
4

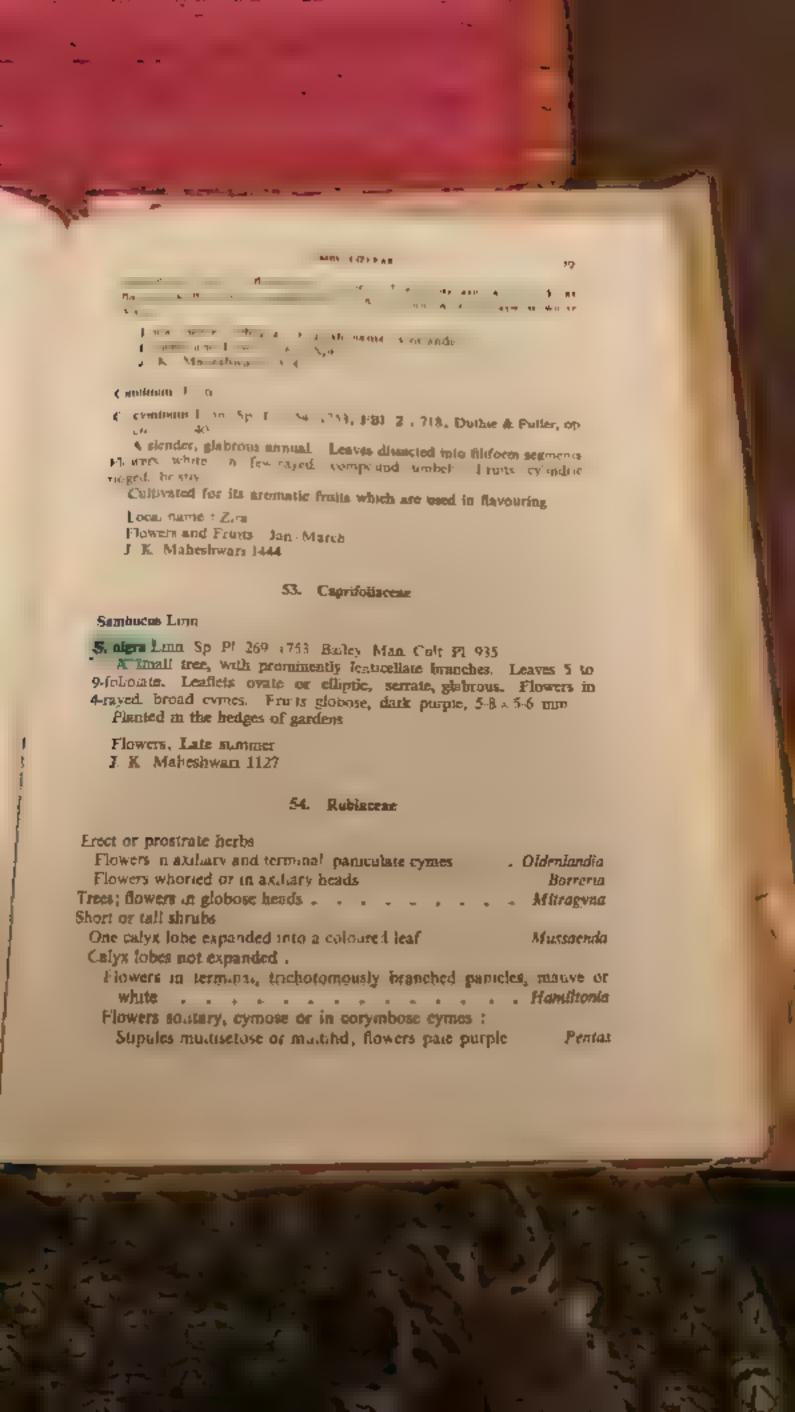
whit

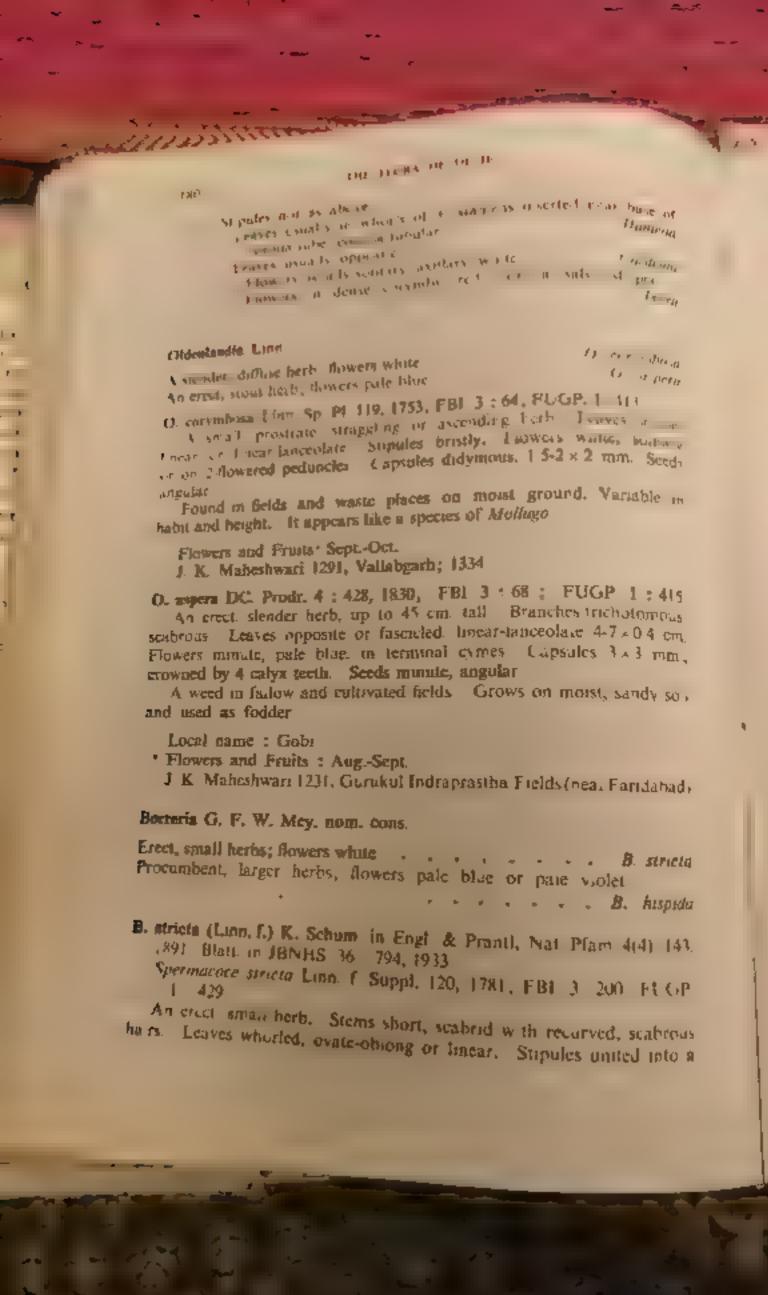
ជ្រាយ

F









MI BIRE 2 AF p he to form he to a serie than a dense as lar, and term in had been the River and top of the server of In his word are the super true of the first true of true of the first true of the first true of J. K. Minies and That he a Delta Rodge B. hisplds K. Schurn in Eng. & Prant No. 15 cm 4(4) Sperming he per hand Sp. Pt. 02 1267 \$ 81 1 200 F CP A present bear deep to ted about Le ves des source the seale sobrong or ell-put obtone 24 x 5.2 m. teachers of wers pure base or pale violet, in a idal whirts, to ramerous. erec. Capsures about 4 2 mill obling builty both corpe's debising vetarally. Seech mal dark brown grooved ventrally Lornes on the Ridge diating the monsoon period. A so found in the prosess as a weed in constrained and unused grounds on damp, sandy so Do hie is EUGP o'ec city reposts that one carpel remains indehiscent I have seen both mericarps to dehisee with one seed in each. Used as Local name : Satgathiya; Chathiyaghas, Gathhanjan Flowers and Fruits : Aug.-Oct. J. K. Maheshwari 136, Hauz Khas Mitragyna Korth nom. cons. M. parvifolia (Roxb.) Korth Obs Nauci Ind. 19, 1839, 111GP 1 408 Nauclea parvifolia Roxb. PL Cor 1 - 40. t. 52, 1796. Stephegyne parvifolia Korth in Verb Post Ges 161, 1840 FBI 3 25 A large or medium-sized, decidaous, sweel-scented tree Leaves variable in shape and size orbicaiar, oval or obovate. Flower heads white or light yellow, about 2.5 x 2.5 cm. Stigma mitriform, while Cocci 2, debiscent. Seeds winged. Probably introduced on the Ridge. Some trees occur on the Oid Delo, Ridge near Chauburjha Road. Also planted as a roadside tree along side-lenes of New De hi. The flowering and fraiting is very quick Local name : Kadam Flowers: Aug.-Sept. Fruits: Cold season J. K. Maheshwari 278, Old Delhi Ridge Mussaenda Linn. M. Intenta Delite, Cent. P. Méroé 65 / 62 1826 Bor & Ruiz 80, f. 50 Pl, 25

A cree which would below few extension fraction with the term, and were a reach corresponding mes the early wellowed test . . a winds my yellow coloured test con a so connecta think a gardent From March A of Aug Old I K Mar was 108 a new rate Campus

Ç,

ell

 $\Gamma^{\rm B}$ 

b

d

If sussections Road Mort. Beng 15, 1814, norm und & Fr. Ind 1 : 534 N. 18 3 197 1. C.P 1 476 Bor & Ratz 97, 5 62 Pl 34 30 A tall shoot Cenves cyale e Louis or lance state rough or lacenna. I have some that haish scented, name tous, in term no , tricholomously branched numeter. Capsules el psoid t altisated as an ornamental shrub in gardens and bunga ow her gen

Local name : Bare-champs Flowers : Dec.-Feb. J K Maheshwari 1365, Talkatora Gardens

#### Pentus Benth

P lanceolata (Forsk ) K. Schum in Engl. & Prantl. Nat. Pfam. 4(4) 29 1891 Baney Man Cuit. Pl. 931 Ophiorrhica lanceolaia Forsk Fl. Acgyot.-Arab. 42, 1775. Pentar carnea Benth. In Bot. Mag. t. 4986, 1344.

An erect undershrub, up to 1 m. tail. Leaves ovate or elliptic, taperng at ends. Stipules fillform, with chiate margins. Flowers bluish pink or pale purple, in terminal corymbs.

Grown in gardens as an ornamental plant,

Flowers : July-Oct. J. K. Maheshwari 1366, Sunder Nursery

#### Hamelia Jacq

H. patens Jacq Enum. Pl. Carib. 16, 1760 & Select. Am. 72, Bor & Raiz. 96, f. 61, Pt. 32, 33. H erecia Jacq. Foum. Pl. Carib. 16, 1760.

An evergreen, handsome, woody shrub. Leaves whorled, elliptic, obovate or oblanceotate. Supules interpetiolar, Flowers reddish-yellow, in a corymbose head. Berries ovoid or globose-

Commonly cultivated in gardens and hedges around bungalows.

Flowers \* May-Oct Fruits : Nov J K Mahesawari 65, University Campus





Erect or prostrate herbs and undershrubs, with leaves not as above Pappus absent

Pappus of 2-4, persistent, spreading awas, ray florets steme

Pappus plumose or of scales, bristles or awas

I gules of ray florets small, white, pappus of 2-5 bristles

Liguies of ray florets targe, whitish, cream-coloured or yellow

Ray florets sterile (rarely fertile in Figureria), yellow, conspicuous

Achenes pubescent

Achenes glabrons

Ray florets fertile (rarely neutral in Verbesing):

Herbs, pappus of feathery bristles, ligales of ray florets

The same of the sa
C #34CPM ASTER AST
White share 185
Telbo A dothance
The involve out by the state of
Later Programme and the second of the second
Tenhe 7 A comment of Beads in page to
Involuced beauty of which introduce to the arrivation
Heads I flawered, on which apinous ups Recepture month bristy. Heads many flowered, separate globase clusters. W. F. a. nope.
Heads many flowered, separate globose clusters W. F. tanope
Heads vellow of orange-yellow pappus absent 31 Carchanas  Lirect, robust book
Leaves very sources
Leaves hardly spinous; pappus of plumose bristies
Straggling herbs heads note and 33 Cynaru
Tribe 8 Mutasage Par
White tomestose herby involved disc florers bilabinte.
The following artificial have a spinescent 35. Dicoma
mination of the general
Rowers white, whitish or creamy .
2. Heads compound, with two large bracis; marshy kerbs
2. Heads simple and not as above :  3. Male, and, female, bead.
3. Male and female heads separate, the latter 2-flowered
3. Male and female heads not separate :
4. Leaves compound, pappus of 2-4, spreading awns
22 Bidens
4. Leaves simple :
5 Involucral brucis spinescent, heads subsessile
5. Involucial bracts not spinescent; heads short or long-
peduncled:
6. Pappus absent or of a few, minute teeth, ligule of ray
florets small
6. Pappus of 2-5 bristles; heads heterogamous, lightes
of ray florets small
6. Pappus of 5 scales, heads homogamous
7. Ageratum
6. Pappus scales awned and plumose, ligules of ray
florets large

e ha

THE PLORA OF DECIM 186 r to see a place or how seemed suppress how on go could be low elem who may arrested & I can make and resolute approprie 3 Carthanna I cent my per and me in reaching spices w to ver replean and comme more or less spin loss sering of the states destinate broads about your age 5 Superflux a I mes chiefly radical as stems stender and erest speaking or procumbers O Laber of an prominently imsped actions brakes species gulfreated it have not crisped acheres not beaked species wild of Heads small, below 8 mm across, ox tymbose v t. Heads arger above 10 mm across, talemose or 4. Launara particulate. \* Handa heletogamous 12 Leaves deeply prinaineet or dissected into fillform or very narrowly unear segments. 13. A tail herb, 4-18 m bigh, heads minute, arranged in a panicle 29. Artemisia 13. Small herbs, up to 20 cm. high, heads usually solitary, C' > axiliary and terminal ! 14. Pappus of two, spreading awas 20 Glossocardia 14. Pappus copious, of seinse hairs, heads showy, above 150 4.2 .4. Pappus scarce or shortly ear-shaped; heads not showy, . below 1 cm. in diam. . . . . . . . . . . . 28. Cotulo 12. Leaves not divided . 15. White woolly or woolly herbs, leaves woolly or not or only beneath ! 16. Heads crowded into corymbose or ovoid clusters . 15. Gnophalium 16. Heads solitary, not chistered : 17. Plants shrubby; heads above 2.5 cm. in diam . . . . . 27. Verbesina 17 Plants herbaceous; heads up to 2.5 cm. in diam. . 18 Habit erect, leaves broad auriculate at the base; heads above t cm in diam, . . . 13, Vicoo 18. Habit diffuse or escending; leaves half-amplexicaut or not, heads below I cm. in diam. . . . . . . . . . . . . 14. Pulicaria 15. Glabrous or pubescent herbs and thrubs : 19. Heads to unilateral racemes forming a paniele, golden-8 Sotulago

4

Ç.F

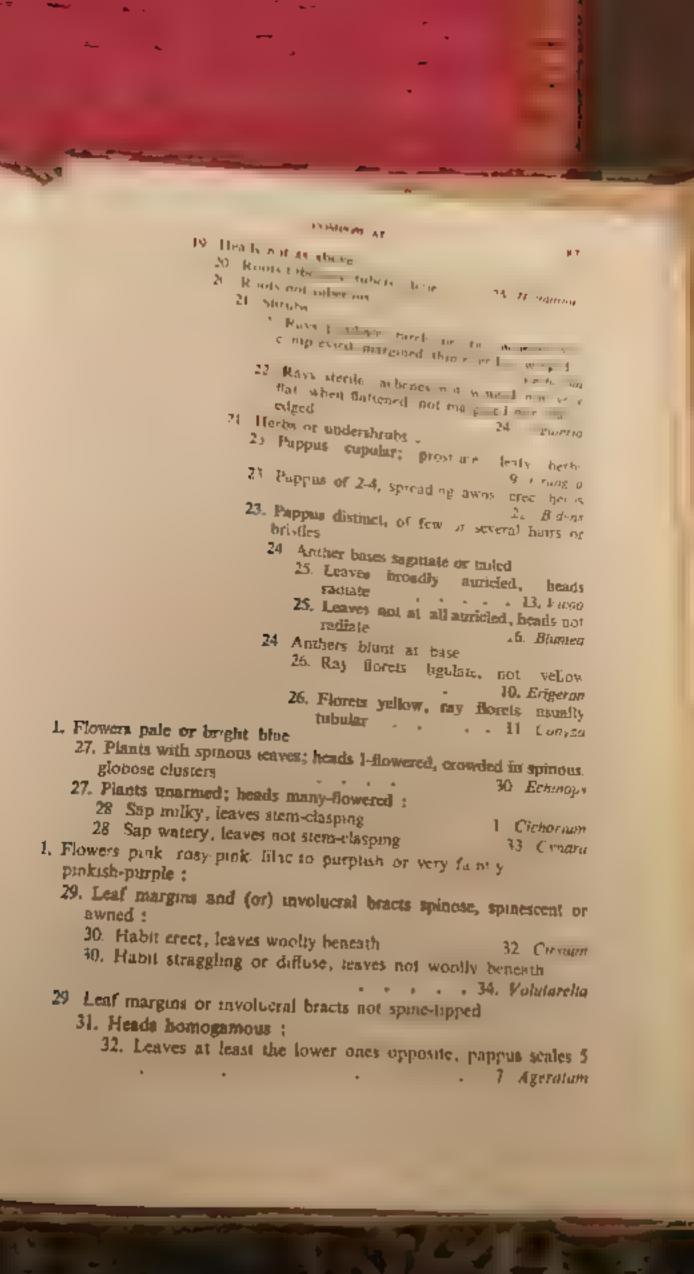
4

1.3

14

ď.

t



THE PEORA OF DEEPIN

N.S

12 Jeaves alternate pappus of several have

 $\ell_i = |||_{\mathcal{C}^{p}(\Omega(\Omega) \cap \Omega)}$ 

13. Ha ry or lucestic heebs not aromatic, anthers blunt a light for here to be a local and have a local or a local heat around a room a local light.

to Herbs or shrabaceous often arounds bear s nor was the Herbs or shrabaceous often arounds bears sugatate, not tailed

15. Leaves not decurrent, anther bases tailed

16. Blunica

14 Undershrubs or shrubs; bracts broad 18. Pluchen

1 Cichorium Umri

. 11

C. lotybus I on Sp. Pt 813, 1753, Bailey Man Cult Pl 983

An erect or prostrate, hispid herb Latex white Leaves ob a toeolate or broad-lanceolste, siem-clasping basal leaves usually pinna ely divided upper ones undivided or lobed. Heads bright blue, session homogamous. Achenes glabrous. Pappus extremely short, scaty

Native of Europe and found wild in N W. Himalaya from 1.2.3.3 km. Found mixed in the fields of winter season crops. Often as an escape

Local name ; Kāsai Flowers ; April-May

J K Mabeshwari 1019, Gaushala Agricultural Farm (Azadpur)

### 2. Youngia Cass

Y japonica (Linn.) DC, subsp. japonica

Crepis Japonica (Lim.) Benth. Fl. Hongk, 194, 1861

Prenanthes japonica Linn. Mant. 107, 1767.

An erect, slender herb. Leaves mostly radical and rosette-forming, sinualty lobed or pinnatifid, membranous, 6-15 · 2-4 cm. Floral shoots slender, erect, corymbosely branched near the top. Heads up to 6×9 mm, yellow, homogamous. Achenes reddish-brown. Pappus mivery,

Occurs to moist shady places of gardens. Also found in the crevices among stones of embankments.

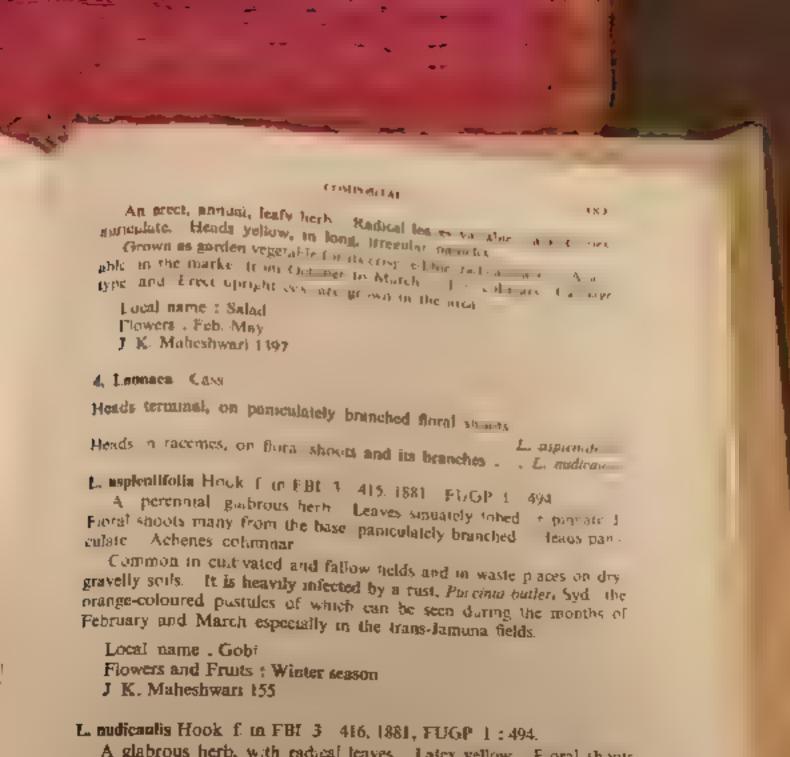
Flowers and Fruits : Feb.-May

J K Maheshwari 620, Roshanara Gardens, 1013, Azadpar Road, noar radway lines

## 3. Luctura Linu.

L. sativa Linn Sp. Pl. 795, 1753, Bailey, Man Cult Pt 984





A glabrous herb, with radical leaves. Latex vellow F oral shoots spreading, usually naked Leaves sinuately loved or pinnatifid, teeth white. Heads more or less subracemose, yellow Achenes columnar, ribbed, much shorter than the pappus.

Common all over the area in waste localities.

Local name : Goba

Flowers and Fruits: Sept.-March

J. K. Maheshwari 836; 912, New Delhi Ridge

#### 5. Souchus Linn.

Involucial bracts glandular, achenes transversely rugose. S. arvensos. Involucial bracts more or less glabrous.

Leaves sharply dentate or spinous-dentate, auricles appressed

S. asper

Leaves with small teeth; auricles spreading

S. oteraccus

190

S. arrensh I in n. Sp. pt. 101 (1911 - FB1 3 - 414 PUGP 1 + 401 a pereinal erect bech 6th tration tall Some his would be a very heanched, glandular-barry above Beauts pale ye low to eliminate white or hellately conventions. Pedancies and bracts gland har harry a themes related training with page as In own

marin n waste places and fields. The latex is said in he way

nave thee

Locar name . Gubbl : Pili dudh Flowers and Froits: Dec.-March J K Mubeshwar 802

4 maper 1 com Boll, Bril. Herb. 1: 47, 1756 , FBI 3 , 414, FUGP 1 : 4)3 Somehue oueraneur var asper Linn Sp. Pt. 794, 1753

As each berh I caves entire rune nate of primatible has famplex caul, sharply dentate or spinose-dentate. Heads in umbe ate cyme-Achenes 3-ribbed on each face

Occurs in waste places

Flowers and Fruits: Cold season

S. olecaceus Linn. Sp. 61, 794, 1753 ; FBI 3, 414 ; FUGP 1, 492 An erect annual 60-100 cm. sail Stems glaucous Leaf auricies

spreading Heads borne in umbellate cytries. Achenes 3-ribbed on each side, moriculate.

Common in fields and waste places.

Local name Pile dodhi

Flowers and Fruits - Cold season

6. Vernouis Schreb, nom. cons.

V. cineres (Linn.) Less. in Linnaez 4 : 291, 1829 & 6 673, 1831 , FB1. 3: 233 ; FUGP, 1 : 441 ; Merr, Enum. 3 : 592.

Conyza cuierea Linn. Sp. Pl. 862, 1753

An erect, variable herb. Leaves ovate to ianceolate. Heads pink, ross pink or lilac in corymbs, homogamous, small, about 1 - 0.7 cm. Achenes terete, harry. Pappus white.

Common throughout on wet or dry soils. Occurs on the Ridge in the crevices of stones. During the monsoon months this plant is erect, ap to 1 m ta 1, after the monsoon it is a small plant with a more diffuse

Flowers and Fruits Rainy and winter seasons J. K. Maheshwari 328; 348

## 7. Ageration Linn

A. conyzoides Linn Sp. Pt. 839, 1753 . FBt 3 \* 243 . FUGP 1 \* 443 .

COMPOSITION An eres harry nominal hours have a take heavy range of the Leaves broads and treme there were the terme to the terme for the park of purple agreet day of the state of the sta to him on the last of the second of the seco ten property on A may be about the new to be and a second p he fait or har to stay to a super to the stay of the carret Land as on le todder Local name Nam Tambakon Biakopi as flowers and Free Jap Com I K. Makeshwari 103 6 3 Resharara Condens. M. Solidago | my S. canaderesis I, no. So. pt. 878, 251, Bully Man Cont. pt. 877 A woody shrub across target state a vened scale in the p.8.1 5 cm. Heads 1.5. 4 mm bright vel a in those and recurred at an racemes forming a py amida panete Grown as a hedge in lawns and along font noths in gardens English name : Golden rod Flowers and Fruits : Oct.-Dec. J. K. Maheshwari 529, University Campus 9. Grangea Forst G. maderaspatana (Linu.) Poir Encycl. Suppl. 2 825, 1812 , FHI 3 247 , FUGP 1 446 , Merr Entra. 3 599. Artemisia maderaspatana Linn. Sp. Pl. 849, 1753. A prostrate, tufted, seafy herb, forming cumular pa ches Leaves sinustely pinnatifid, thick Heads yellow, disciform, beterogramous. shout 6×9 mm. Pappus cupular Found on dry, sandy-clayer soil and along Jamuna Banks on moist, silty soil. Flowers and Fruits Major part of the year J. K. Maheshwari 159 10. Erigeron Linn. Heads up to 6 mm across, achenes glabrous E canadensis Heads above 6 mm across, usuady about 12 mm, achenes laxly harn . . . . . . . . . . E. bonariensis E, canadensis Linn Sp. Pt 863, 1751, FB1 3 254 FUGP 1 437 An erect, much-branched, stout, ha ry herb, up to 1 m ta Leaves 3-8 - 0.3-0.5 cm, narrowly onear. Heads heterogamous, 3-4-4.6 mm, in branched panicies, yellowish. Achenes flat, glabrous

٠.

10

Occurs in most shody places and waste grounds near fruit orchards

करूपे विस्तर्भा Plowers and Fruits : May-July

J. K. Maheshwar, 109, Sazat Robilla Gardens

E. bonariensis Lien Sp. 23 863, 1753 Burtl to Kew Bull 371, 1948 1 andotho W tid Sp. Pl. 3 1955 1803

At erec atout deep rocted, lursule herb, 30-90 cm tall, usua v branching somewhat abuse the ground Stems and branches with or wired ascenting teates Leaves 4-10 0 5-0 8 cm frage entire fleach numerous 6 12 mm, so corymbose panicles heteriganing Ray florers whitish | Corolla of disc Rorers pale yellow | Achestes obling a ghilly curved brown loose a hairy

give we more or less preparationary in gardens, lawing and a city of advisor and gives a characteristic appearance to the grassy grounds by its exert

habit, closely set leaves and terminal panicles

Phulet Losal name Flowers and Frints: Late summer and rainy seasons J. K. Maheshwari 918, Timarpur

#### 11. Conyza Less. nom. cons

C. segyptiaca Dryand in Ait Hort. Kew. 3 183, 1789; FBI. 3; 258 FUGP 1 448.

An erect or procumbent hirsuic berb Leaves pinnatifidly obed Heads corymbose or panicied, heterogamous disciform, about 1 < 1 cm Involucial bracts narrow. Pappus pinkish

Found along Jamuna Banks in moist soil

Flowers and Frants : Feb.-May J. K. Maheshware 1010

#### 17. Caesulia Roxb

C. axillaris Roxb. Pl. Cor 1 64, L 93, 1798, FB1 3 291, FUGP 1 462. A prostrate or subcrect, marsby herb. Leaves 7-15 × 1-1.8 cm., narrowly lanceolate; base auncled. Heads homogamous, axil ary, sessile. Bracts 2. Flowers whitish Achenes flat, one-ribbed on each side

Occurs in marshy places near canals or in rice fields. Common in the currivated and fallow fields of virlage Gheora

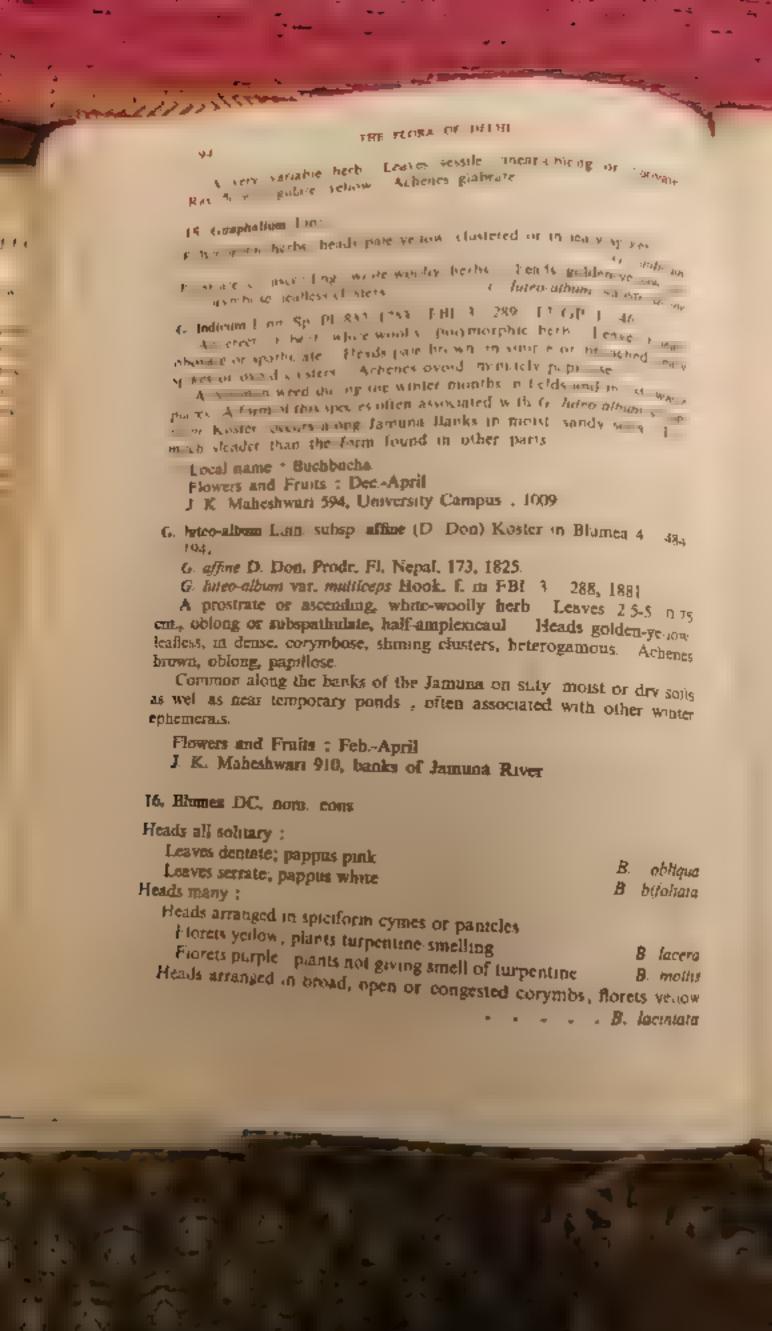
Flowers and Fruits : Oct.-May J K Maheshwari 536, Hindan River Banks

## 13. Vicos Cass

Freet, woody herbs involucial braces with recurved tips Frect rigid herbs, involucial bracis erect . V ventita V. mátea



Cottle of s restita Branches El a f FRE oner We Co set P ... to have the are at the court of the the state of the s the state of the s or in his in it is the one the first I sees the a fab sta I K M C S WALL 6 5 A hughest contract to the state of the state min in a Wall Sp. 19 3 more for first feet a greatest and a fact of his first file of the 4 erees brasched rigid herb Leases azzaile, lanceolais or some the course because rounded or hadate fleeds by the way gram in diam hererogamore involveral brace each Pangus of my florest absent, of disc florets few stender har. Common on dry sort of fields and amused ground Flowers and Fruis (At-March J. K. Mineshwari 497, Na algarh, 499. Ozmebad Januana Banks. Pulicaria Gaerta P erispa Sch Bip, in Webb & Berth, Phyt. Canar > 23, 1836-1847 FB1 3 . 299 , FUGP 1 - 466 A stout, diffuse, white-woodly herb I have ascending, half amplexieral, linear-oblong of spathulate, undulate-risped Heads yellow he crogamous, rayed Achenes glabrous, oblong Pappus much longer han the fruit Common in waste places and along Jamuna Banks in moist or dry, SULLY SULLS Local name : Haldwa Flowers and Fruits : Feb.-Aug K. Maheshwari 914, Najafgarh P. angust(folia DC, Prodr. 5: 479, 1834; FBI 3 299; FUGP . 1 465 A rare plant. Recorded from the Joniona Raynes near De hi and Apple to Duth e.s. EUGP (loc cit). I have not seen the plant anywhere



B, children (Lanna) Druce in Rep Bot. Piech 11 to Bart for 4 600 to 2 194 Er geron obliquies I on Many 513, 1711 Blumen amplectons DC, in Wt, Contrib. 13, 1834; Flbt 1 : 74

A decumbent, woody, deep-sounted been through the demely a lost for expecte half index call the new of obsequence for the a fine me and ones often en re Heads use tom. Hay florets pinkish 12 to florid vellowish. Achenes hairy, ohlong,

Common in dry was c place and fallow grounds

Placers and Frank . Feb. May J K Maheshwari 922, Tima par

g, abiqua Desce var polithera (DC) Mahesh in JBNHS 54 1905 911 R pub. Horo DC Prodr 5 414 [814 B respectives DC var publifora (DC ) Cl in FBi ) 260, 1801 This variety occurs in samely words near Okhla. A stout a lious herb ) ong seaves densely vilota Fierets pink. Heads larger than in the [VPG-

Flowers and Fruits : March J K. Maheshwari 1947

B. bifoliata DC n Wt Con nb 14, 1834 , FBI 3 269 FUGP 1 452 An erect, bushy harry herb, branching from base. Leaves serra e Heads solitary, on ong peduacies. Floreis reliew Achenes narrowly obiong, angular. Pappus white,

Occases in waste places and fallow fickle.

Flowers and Fruits March-May

B. Iacera (Burm. f) DC. Prodr. 5 · 436, 1834 ; FBI, 3 : 263, FUGP I 453, Merr. Enum. 3 : 602. Conyzo lacera Burm, f Fl. Ind 180, 1768.

An erect, leafy herb. Leaves oval or obovate, dentate or servate. not lobed. Heads in short, axidlary evenes or terminal, spiciform panieles. Florets yellow Achenes not ribbed, glabrate

Occurs in shady places and along canal banks, gives a strong smell of turpentine.

Flowers and Fruits : Feb.-June

B. mollis (D. Don) Merr 1a Philip. Jour Sci (Bot.) 5 - 395, 19,0 Erigeron molie D. Don, Prodt. Fl. Nepal. 172, 1825. Blumea mightiana DC in Wt Contrib 14, 1834, FBI 3 261, FUGP 1 : 453

An erect, villous, leafy herb. Leaves ovate, obovate or lanceolate, serrate. Heads many, in spiciform cymes or panicles. Flowers purpash. Achenes terete or angular, sparsely harry



to the many wholes and anased ground 400

I was that is fell stay B (semista R of 1st f n c c to 1824 1 Rt 2 26) 11 CP 1 454 formulate R of 186 of the Rights of 1864 of the Conference of 1864 of y co he show that can refer the left of a left of the contract of the left of the contract of the second and the state of the state of the second the tenant or pur excelled on painties larger yellow A to

to did waste places, unused pround and near small water to be a

Flowers and Fruits : March-May

1º Laggers Sch Bip

L aurita Sch -Bip et C. Comp Ind 92, 1876 , FBI 1 27, FICD

A perconial vi lous, branched berb Leaves se-sile shortly decriner deptate or subprintatifid. Heads pink, about 1 × 1 cm. n territing panjoulate coryults. Involueral bracts linear. Achenes hady

Common during the summer season in waste places, along readedes

etc. becoming gregarious in some places

Flowers and Fruits: June-July J. K. Maheshwam 480, University Grounds

#### 18. Pluchea Cass

P. lanceolata Cl. Comp. Ind 94, 1876, FBI 3 272, FUGP 458 Parker For Ft. 288

An erect, stout, hoars pubescent, robust herb, 30-100 cm tall Leaves thick, conaceous, ascending, 4-7 x 1-1 5 cm, oblong or oblanceolate Heads pinkish or purpush, 8 x 4 mm., in compound corymbs longer than broad. Involuere many-seriate, outer bracts tinged with purple Achenes migute

A terophytic plant. Common in sandy soils and often found on the slopes in gregarious patches. Very common near the village Gangator on Western Jamuna Canal Eaten as fodder by the cattle.

Local name : Rukhri ; Bai sura: Flowers and Fruits . Apru-July J. K. Maheshwari 162, Azadpur Road

## 19. Xanthium Line

X. stenmarium I mr. Sp. pt. 987, 1751 , FBI 3 303, FUGP 1



Aschipeness restate to the property of the restate to the process of the process

Chitta : Bhurat : Bhurelotta Charelotta : Kutar : Kutar : Kutar : Bhurat : Bhurat : Bhurelotta : Kutar : Kutar

#### 20, Lifernocardus Cass

G. bosvalles (Line, f.) DC in Wt. Contrib. 19, 1834, Cambre 1 Pres.

t erbestna bosvallea Linn, f. Suppl. 379 | 281 Ple vicar-lia linearifolia Cass, in Diet Sc. Nat. 19. 62, 1821, FBI A. 3.08. ECGP., 471

A small, prostrate or diffuse tuited annual. Leaves by now segments narrowly linear. Heads small, yellow, heterogamous, about R S mm. Achenes densely bearded expectatly along the edges. Awas spreading

Occurs in sandy and rucky tracts near Okhla and Fandabad

Flowers and Frmits : Aug.-Oct J. K. Maheshwam 734 Okha , 1237 Gurukui near Gargaon

### 21. Eclipta Linn, nom, cons

F., prostrata (Linn ) Linn Mant 286, 1771 , Santagau, Fl. Purandhar 68

Verbesina prostrata Linn. Sp. Pl. 902, 1753

Eclipta erecta Linn. Mant. 286, 1771; FUGP. 1: 468

E. alba Hassk. Pl. Jav. Rar. 528, 1848; FBI 3: 304

An erect or prostrate, rough annual. Leaves variable, 2.5-8×6.8-1.5 cm. linear or oblong-lanceolate turning black when dry. Heads white, 7×9 mm, solitary or 2-3 together. Achenes winged on the marg. 1 with warty excrescences. Pappus absent.

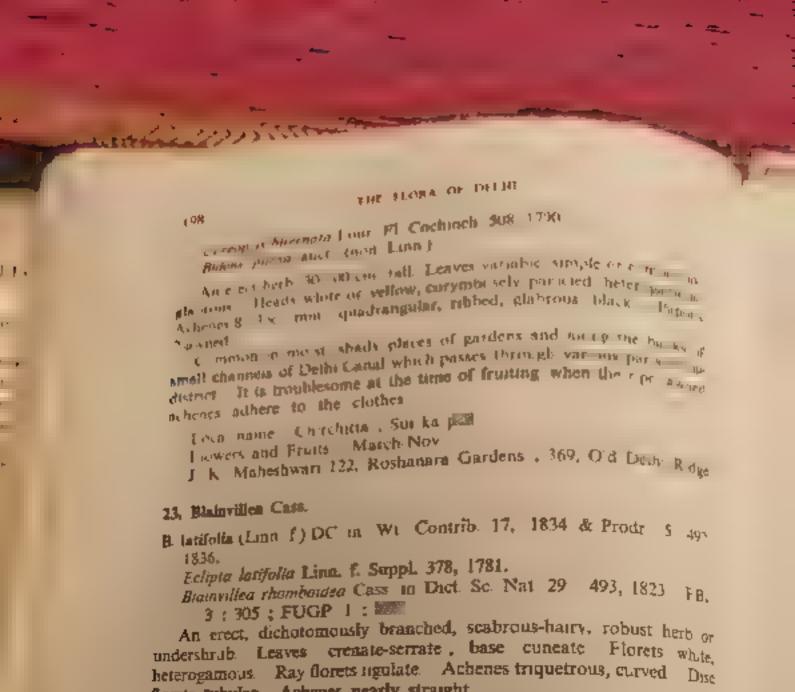
Common in different types of habitats.

Flowers and Fruits : Throughout the year J. K. Maheshwari 160, Shahdara

#### 22. Bidena Linn

B. biternuta (Lour.) Merr. & Sherff in Bot. Gaz. 88 293, 1929. Santapau in RBSI 16 (1): 151, 1953.





florets tubular. Achenes nearly straight.

Found on the Ridge as well as in other parts near moist places or in the shades of shrubs and bedges. The fresh roots possess a faintly are matic odour Duthie in FUGP (loc, cit) gives winter as the flowering period. At Delhi it flowers and fruits during the rainy season.

Flowers and Fruits: Aug.-Oct. J. K. Maheshwari 920, Hauz Khas

## 24. Viguieria H. B. & K.

V. beliantholdes H B. & K. Nov. Gen. & Sp. 4: 226, 1, 379, 1820

A custivated shrub Leaves scabrous, turning black sh on drying Flowers yellow, Like single sunflowers, borne in corymbs. Ray floress fert ie or more often sterile. Achenes usually pubescent

Grown in gardens and hedges,

Flowers and Fruits : March-July J K. Maheshwari 747

## 25. Helianthus Line.

H. tuberosus Linn Sp. Pt. 905, 1753, Bailey, Man. Cult Pl 998.



An erect tuberous shrub Leaves ownte to own e blang, serra e ,99 den are pet alex winger. Heads we may car vated for its or ble tobers which are produced and in red and branches of underground parts. And la de se une ke dis my be or ober Local name : Hattpitch | Logish many | Jerusalen anach ke

#### 26. Tridax Line

I procumbem Linn, Sp. Pl. 900-1753 | 130-3-311 | Fl.Cop. - 4-5 An erect or strang of hisped best Teases was or land the dentate or pinnar sect. Heads creamy or whitish, long-pedurore, while

Abundant an over in waste places along roads des and in the cre vices of old ways

Flowers and Fruits : Dec.-May J. K. Maheshwari 157; 915, University Campus

### 27. Verbesins Linn

Leaves white-woolly beneath Leaves not white woolly beneath

V enceliandes ¥ oncophora

V. encelioldes (Cav.) Benth. & Hook f. ex. A. Gray in Bot Cauf. 1 350

Ximenesia encelioides Cav. Ic. 2:60, 1-178, 1793

An erect, woolly, attractive perennial Leaves distantly serrate or pinnatifiely lobed, 8-15 - 15-3 cm., white woolly beneath appressed harry above Heads golden-yellow, solitary, heterogamous, long-

Native of Trop America. Occurs along the canal banks of Hindan River, often gregarious amongst grasses

Flowers : Aug -Oct J. K. Maheshwari 1260; 1368

V. oncophora Robins & Scat in Proc Amer Acad 28 109, 1893 A shrub, 2-4 m high I caves alternate, elliptic-oblong to oblong ovate, semulate. Heads numerous, cymosely pameulate

Cultivated in the hedges of gardens as an ornamental shrub. Another species V gigantea Jacq is also grown in similar places

Flowers and Fruits; Dec.-March J. K. Maheshwari 1198

#### 28. Cotula Linn.

C. hemisphaerica (Roxb.) Wall ex Benth & Hook f Gen Pl 2 429 1873 FBL 3 3.6 FUGP 1 476



THE FLORA OF HE R Artemista hemispheirtea Roch El tod i 422 332 200 A ritta b creek of full recognition to the first of the contimear theats velicity developing court private to a diary it and a A water season, mousial resemble force Contract of a Facwers and Fruits - Hes. March MALLEY. J. K. Maheshwat, 917 Shahouta 20 Artemisia Long A scoparts Weldyt, & Kit. Pl. Rat Hung 1 66, 1 65 18 18 1 123 ; FUGP, 1 : 477. A erect bra hed perennial berb, 1-18 m tall Sees anged with purple. Leaves cal into filler a segments. Head 2 mm, beterogramous, greenish-yellow arranged in a ponce ours braces shaning. Achenes manute Common as a weed near Sonafgarh vidage in the fields from the case. crops, to waste places and along the bunds of he ds on do party It is easen by the cattle. The twigs are made into bright cleaning houses. Used as purgative Local name : Bano ; Barna Flowers and Fruits . Sept.-Oct. J. K. Maheshwari 1280 ; 1321, Najafgarh W. Echinops Lunn. E. echinatus Roxb. Hort. Beng 62, 1814, nom-nud & Fl. Ind 3, 447 1832 : FBF 3 - 358 . FUGP, 1 : 480 An erect or diffuse, much-branched, white-woodly animal leaves oblong, p mattfid , the lobes ending in long, rigid, narrow spines. Heads unil, wered, in compact, globose capitula. One or two bracts produced into sharp spines, exceeding the compound heads. Flawers pale blue Achenes obcome, silky Common in waste, dry places and open ground.

Local name: Oontkatela Flowers: Jan-June, Fruits: June I. K. Maheshwari 71, Najafgarh

## 31. Carthamus Linn

Heads yedow , plants wild Heads orange-yellow , plants cultivated ...

Correctionas

C assumenths Bieb Ft Taur Cauc 2 283, 1808, FBI 3 386





A spins period to see Served and e) I all the see of th

Local name: Kateri: Kateli: Pohli Kisasabi, in wers and I v. is May Line
J. K. Maheshwari 676, Najafgarh fallow fields

C. finctorius Linn. Sp. Pl. 830, 1753; FBI 3 - 386 Metr Laure 3 6 m. A glabrous shrub Leaves spinose toothed Iseads terminal, or segment stated for a flower up 1 and 1

achenes give an oil.

Local name: Kusum

Flowers and Fruits: March-May

J. K. Maheshwari 1167, University Gardens

### 32. Cirsium Adans

C. arvense (Linn.) Scop. Fl. Carn. 2: 126, 1772.

Serratuta arvensis Linn. Sp. Pl. 820, 1753

Cincus arvensis Heffin Deutschi Fl. 1(2), 130, 1804. FB1, 3, 362

FUGP. 1: 481.

An erect, leafy herb, 0.6-1 m tall. Leaves oblong mear or obovate woody beneath, margins tipped with spines. Flowers deep pink to pale purple. Achenes small. Pappus pale brown

Common in waste places, cultivated areas and along field edges

Local name: Kateli; Katala; Rissa Flowers and Fruits: Feb.-April J. K. Maheshwari 613, Uzirpur (Azadpur)

C. wallichii DC. Prodr. 6:643, 1837.

Cricus realizabii Hook f in FBI 3:363-188., FI GP 1 481

Very rare—see Mukheriee in JBNHS 51(2) 452, 1953. Differs
from C arrense Scop in being talter (F2-3 m.) and in possessing b.

Rexual, yellow flowers.

Flowers : Feb.-March

13, Cynera Line

C senforment Linn Sp. Pf. 827, 1753; Basicy, Mars. Cale Pt. 1, 29

a that thatte Leaves primated hardy spiny Heads large optacle enlarged, fleshy Involuctal bracts unarmed

Cultivated as garden regetable for its soft flest vice of a wer heads and thickened bases of involuent bracks. Avaigned der up he n onths of March and April. Grown from seeds or suckers

Local name: Hatichuk: English nume. Olube articheke

#### 34. Voluturelia Cass.

V. ramosa (Roxb.) Santupau, Pl. Saur. 22, 1953. Cardina romosus Roxb. Fl. Ind. 3:407, 1832 Laiwarpila divaricata Benth & Hook | Gen Pl 2 416. 87 in part; FBI 3:383; FUGP 1:486

An erect or straggling, stiff, dichotomously branched annual Stems white-tomentose, rough. Leaves variable, obovate to oblancemate asually pineatifid-lobed. Heads 12-25 × 08-15 cm. evoid, home gamous involucral bracts many seriate, spinescent at tip purphsh Achenes dull brown Pappus brown, silvery

Common in dry, waste piaces, comes up annually on the University

Grounds. The young plants are used as fodder

Local name: Rissa

Flowers and Fruits: March-Aug.; Winter

J K Maheshwart 916, Chandrawal (near Timarpur)

### 35, Dicoma Cass.

D. tomentoen Cass. in Bull. Soc Philom 12, 1818; FBI 3:387, FUGP

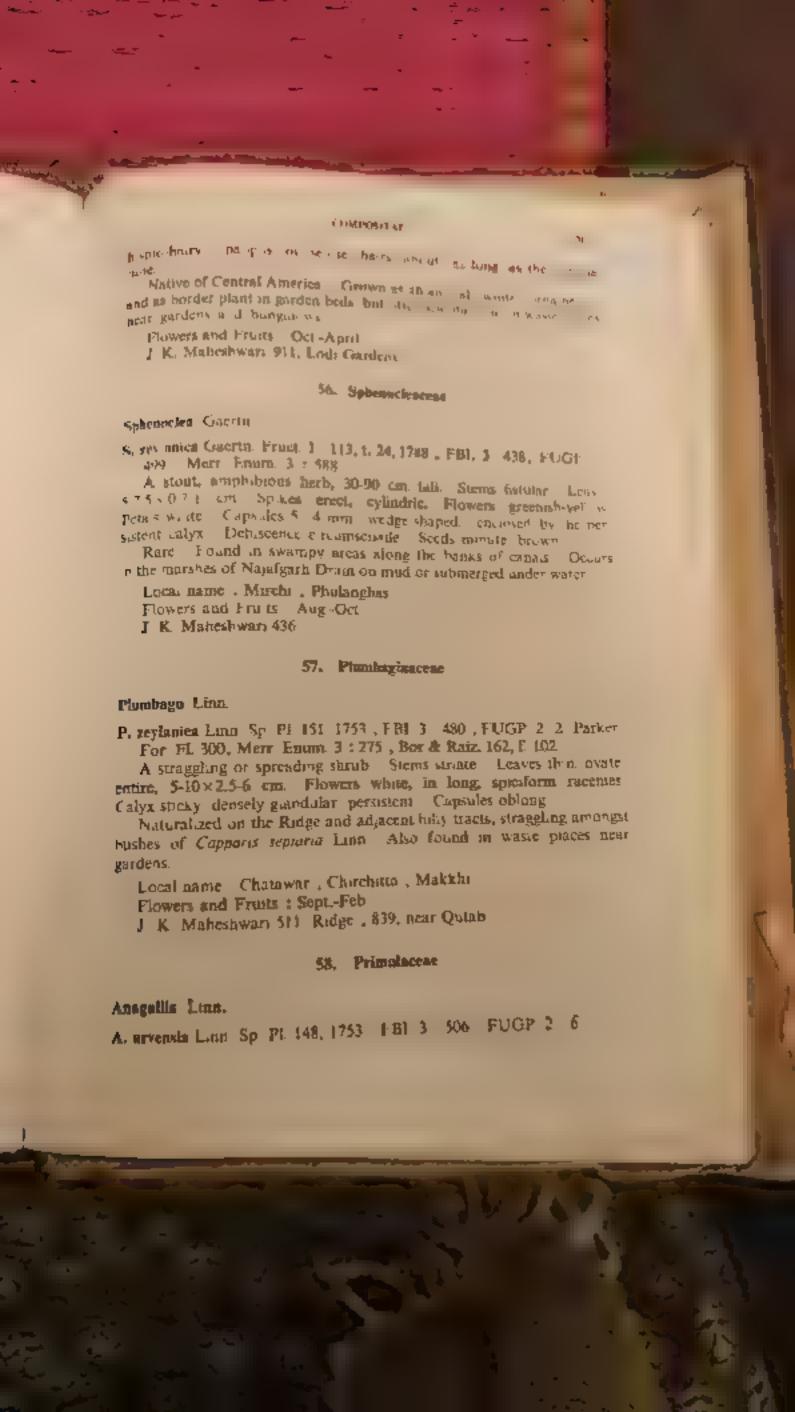
Duthie (in FUGP 1 - 487) records this species from the Jamusa and Chambal Ravines in the districts of Agra, Delhi and Etawah I have not seen the plant in the field

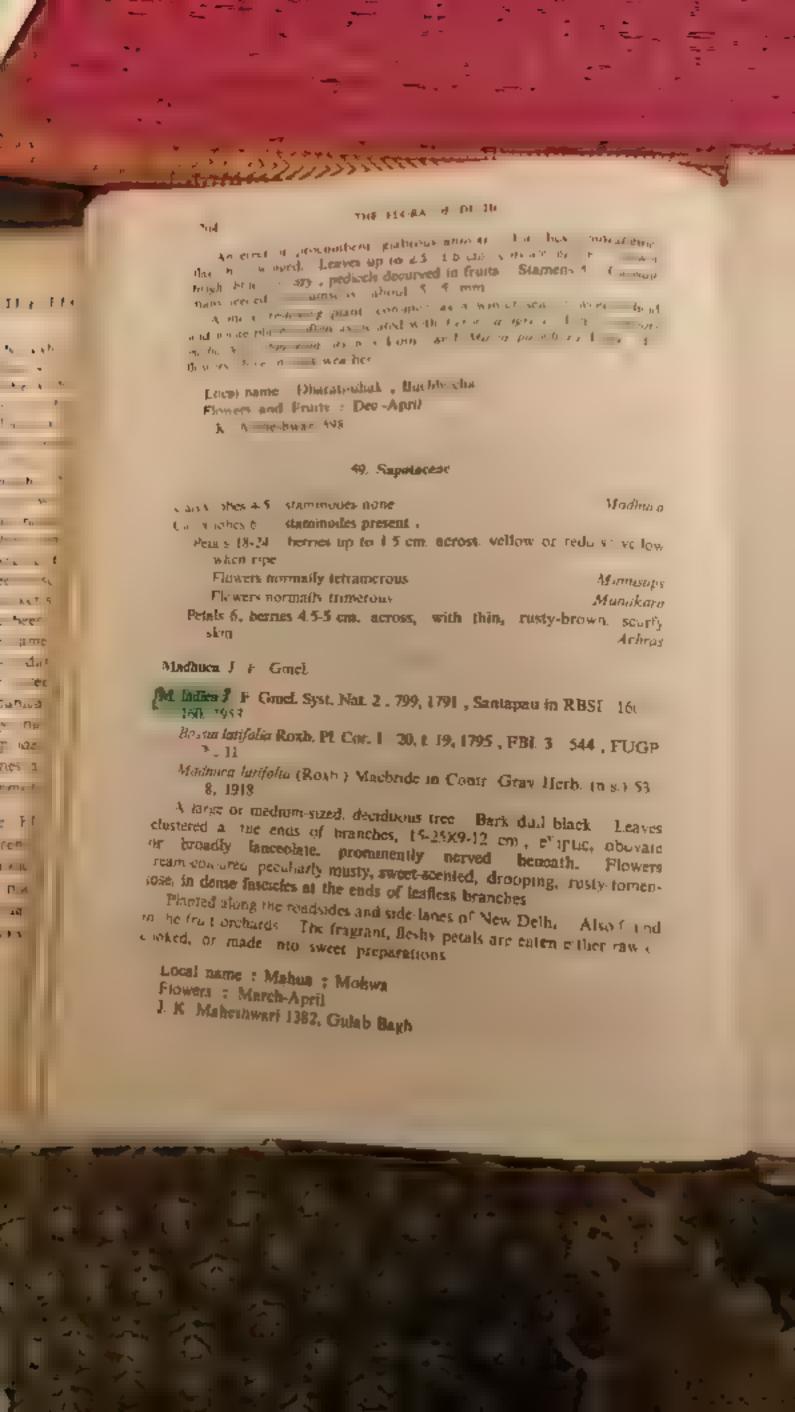
An erect, much-branched herb Stems white-woolly or finally glabrous Leaves linear, densely white-tomentose. Heads many, southry Involucial bracts spinescent.

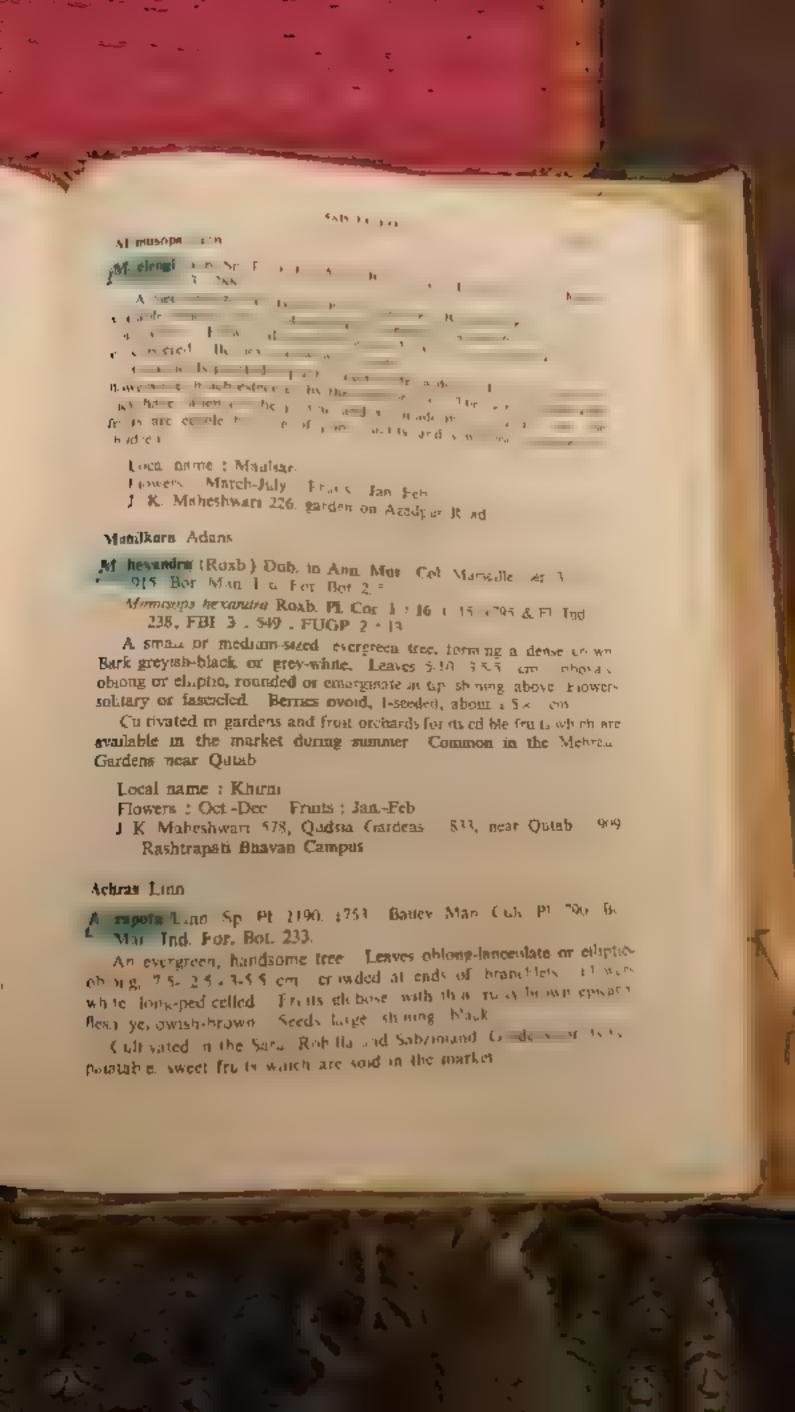
# 36. Hymenatherum Cass

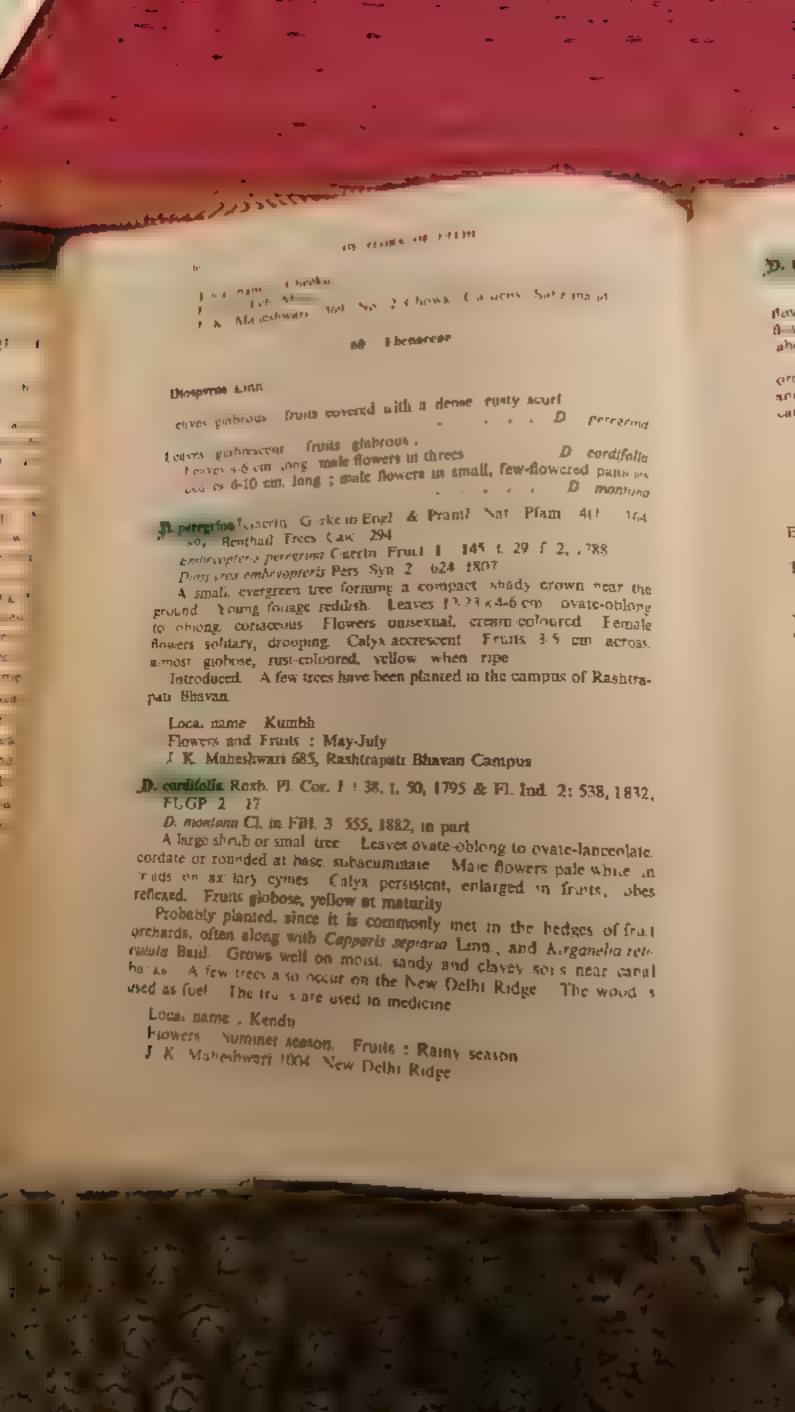
H. tennifollum Cass. Diet Se Nat. 22 · 314, 1821-1822; DC Prodr

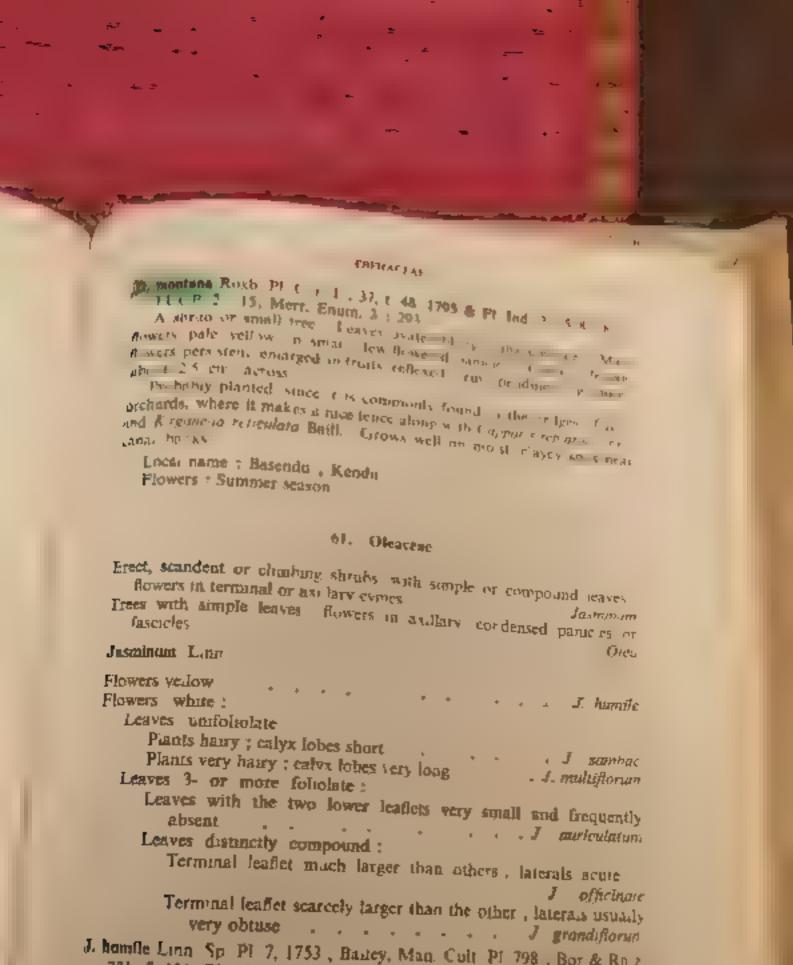
An annual, strong-smelling, creet herb, 15-20 cm, high. Stems simple or branched Leaves deeply pinnatisect, 2-5 x 1-3 cm.; lobes more or less finform Heads yellow, heterogamous, rayed, about 2 cm in diam. terminal, showy Involucres uniseriate. Achenes oblong, angled, black,









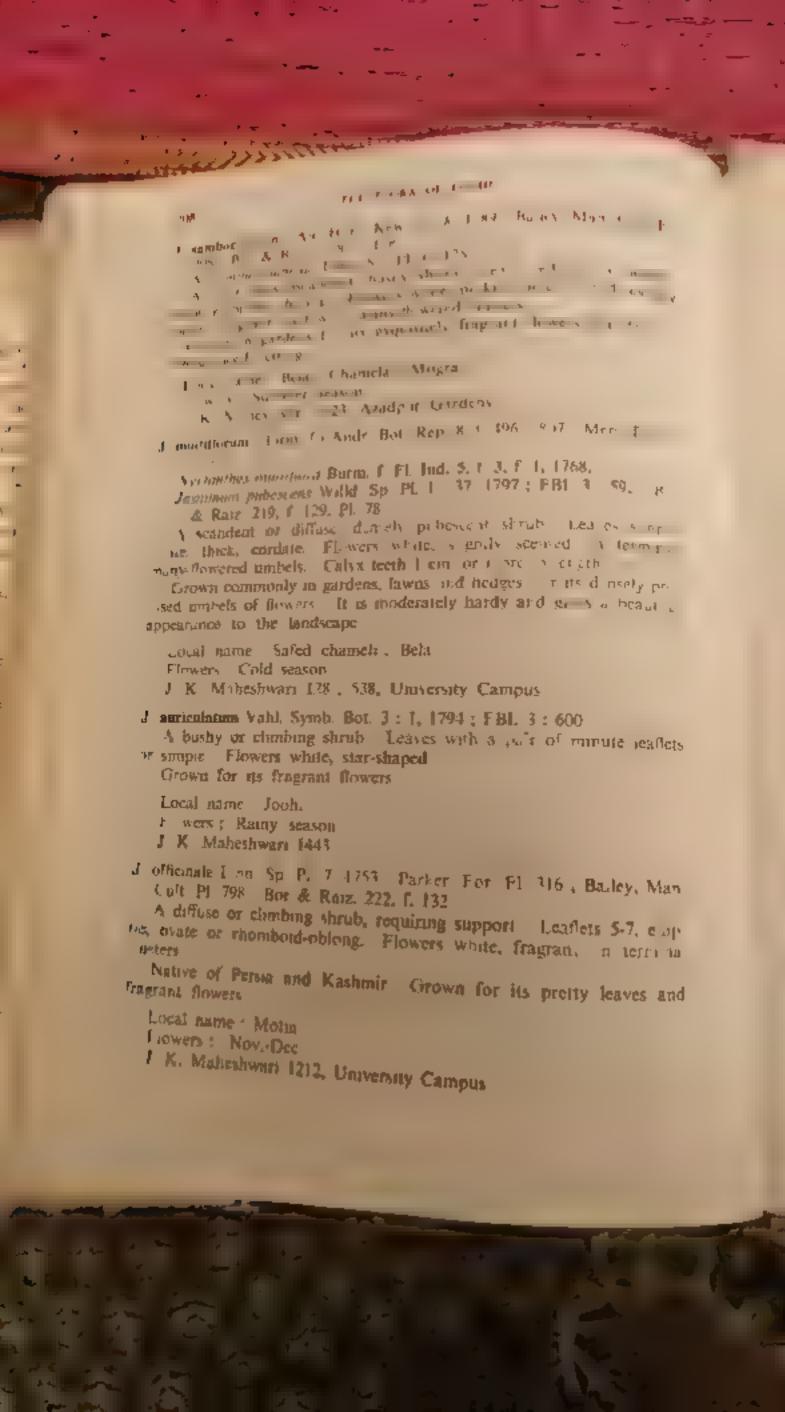


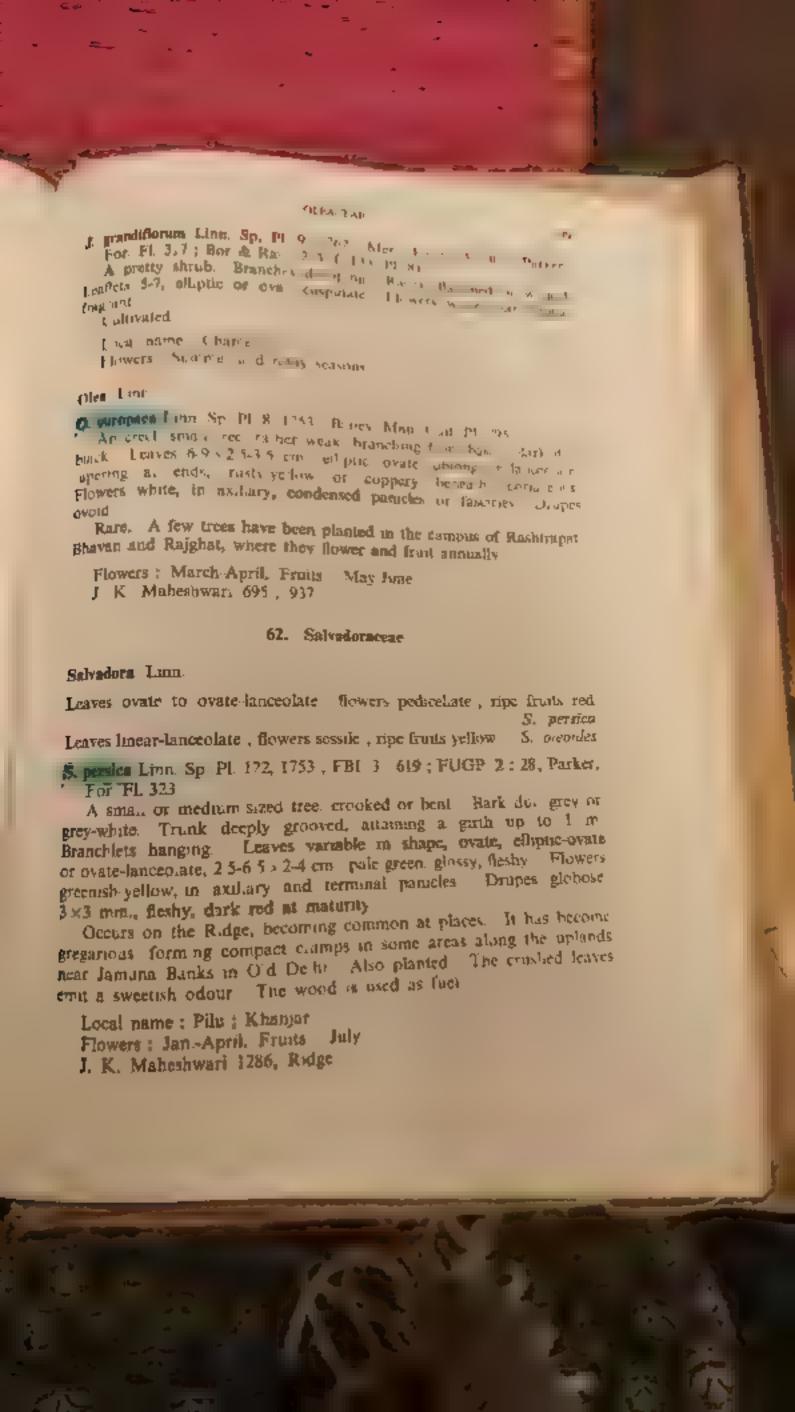
J. hamfle Linn Sp. Pl. 7, 1753, Bastey, Man. Cult. Pl. 798, Bor & Ru 2 221, f. 131, Pl. 80

An erect or diffuse, evergreen shrub. Leaflets 3-7, variable in shape ovate to linear, dark green above. Flowers bright yellow, fragra i in open clusters.

Grown as an ornamental in gardens and areas around bungalows for its fragrant blossoms

Local name : Piti chameli Flowers: Rainy season J. K. Maheshwari 713





Formal Print | January | 1 and And organic of the state of the Diagram of the State of t the state of a lance date of her little of her little of her I all a the Ridge at well as in ne pith t by to y t as A and a the Ridge at well as the Ridge Co. of a real A transfer of the Ridge of Ridge way of his fire after and received the advent to the first the advent to the first three back to the Brief the a rescence is the first which frally tarms back for are successly and are eaten

Cat

€ i

bei

W. 54

1 Maheshwari (367 near Gurdwara (Jamuna Roan Local name . Print : Jal

# 63. Apocymaceae

Freet nerbs or small shrubs Flowers southers or passed from a fedicie dehiscent Catharanin Flowers in cymes, fruit a drupe, indehiscent Rawwyha Erect, diffuse or olimbing shrubs and trees

Habo climbing:

Vullar,s Anthers exserted .

Anthers included

Flowers as long as 10 cm, or more, bell-shaped . Beaumonia

Flowers not exceeding 2 cm., salverform;

Flowers in lax, terminal or pseudoaxillary cymes Trachelospermun

Flowers in compact, trichotomous cymes Ichnocurpus

Habit erect or diffuse :

Plants armed with spanes . . . . Carissa Plants unarmed \*

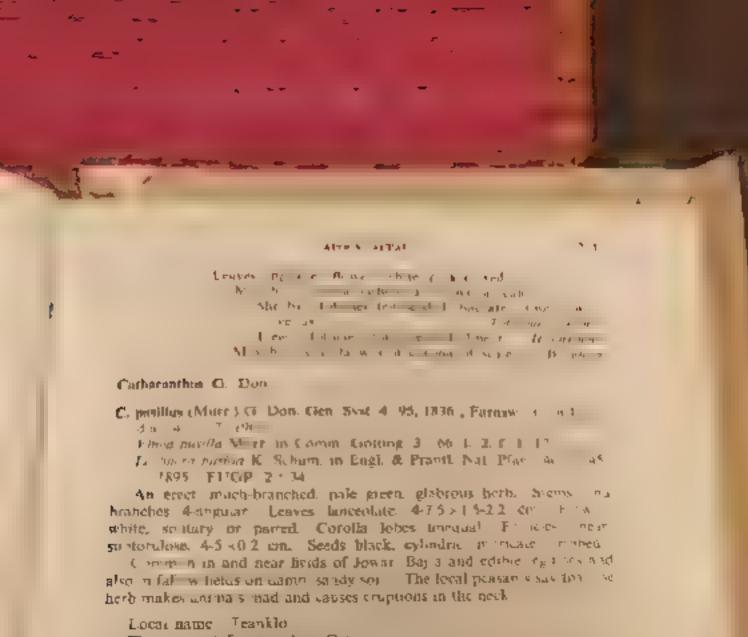
Leaves alternate:

Corcha funnel-shaped; fruit indehiscent, a fleshy drupe

The 11a Corolla salver-shaped; fruit of 2, dehiscent folicles

Leaves opposite or whorled, corolla salver-shaped Leaves whorled:

> Trees : flowers greenish-vellow . . . . Alstonia Large shrubs ; flowers white, rosy or red . . Nernon



Local name Teanklo
Flowers and Fronts Aug Oct
J. K. Maheshwari 334

#### Ranyolfia Lann

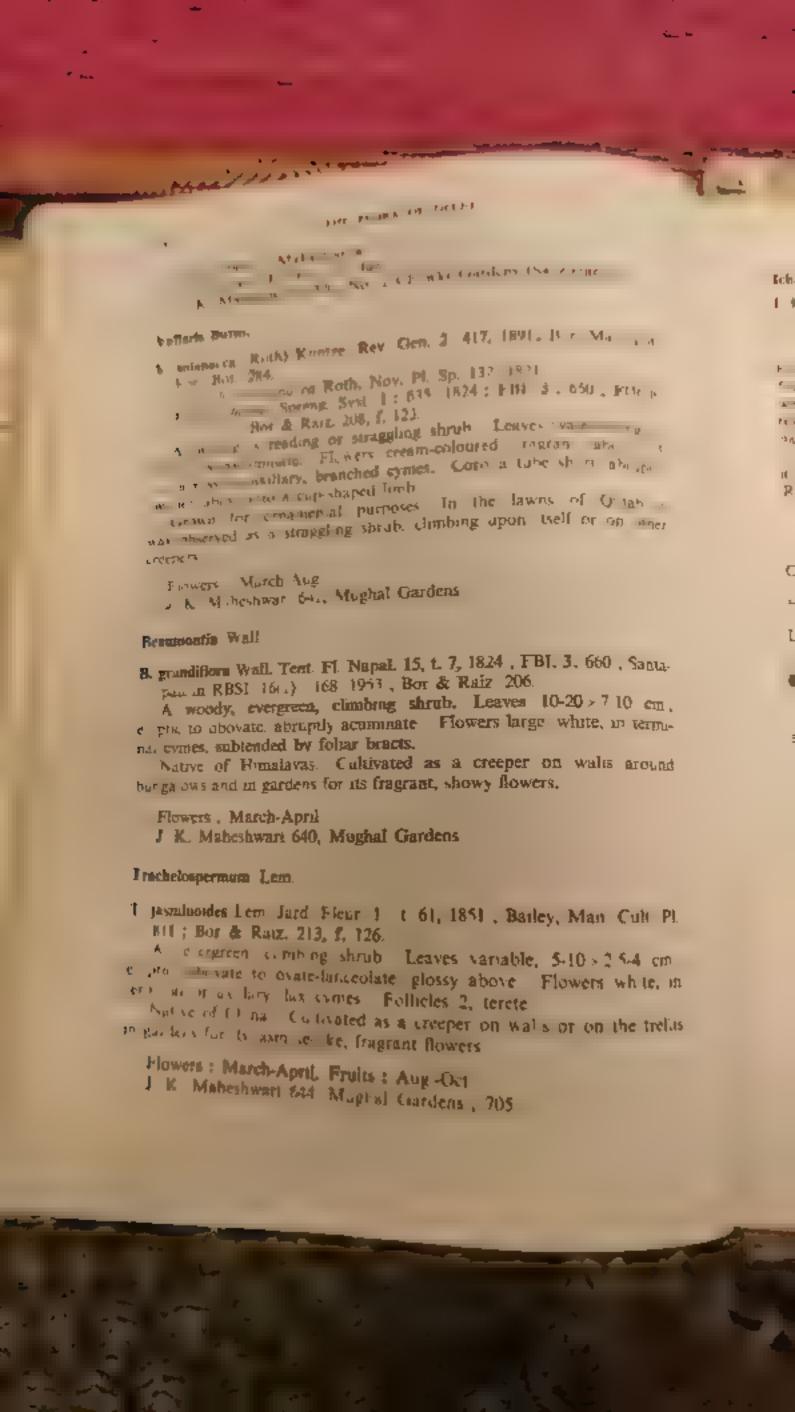
R. serpentina (Linn.) Benth ox Korz, For Fl. Burma 2: 171, 1877, FB. 3: 632; FUGP. 2 33; Parker, For Fl. 328; Santapau in RBSI 16(1): 166, 1953.

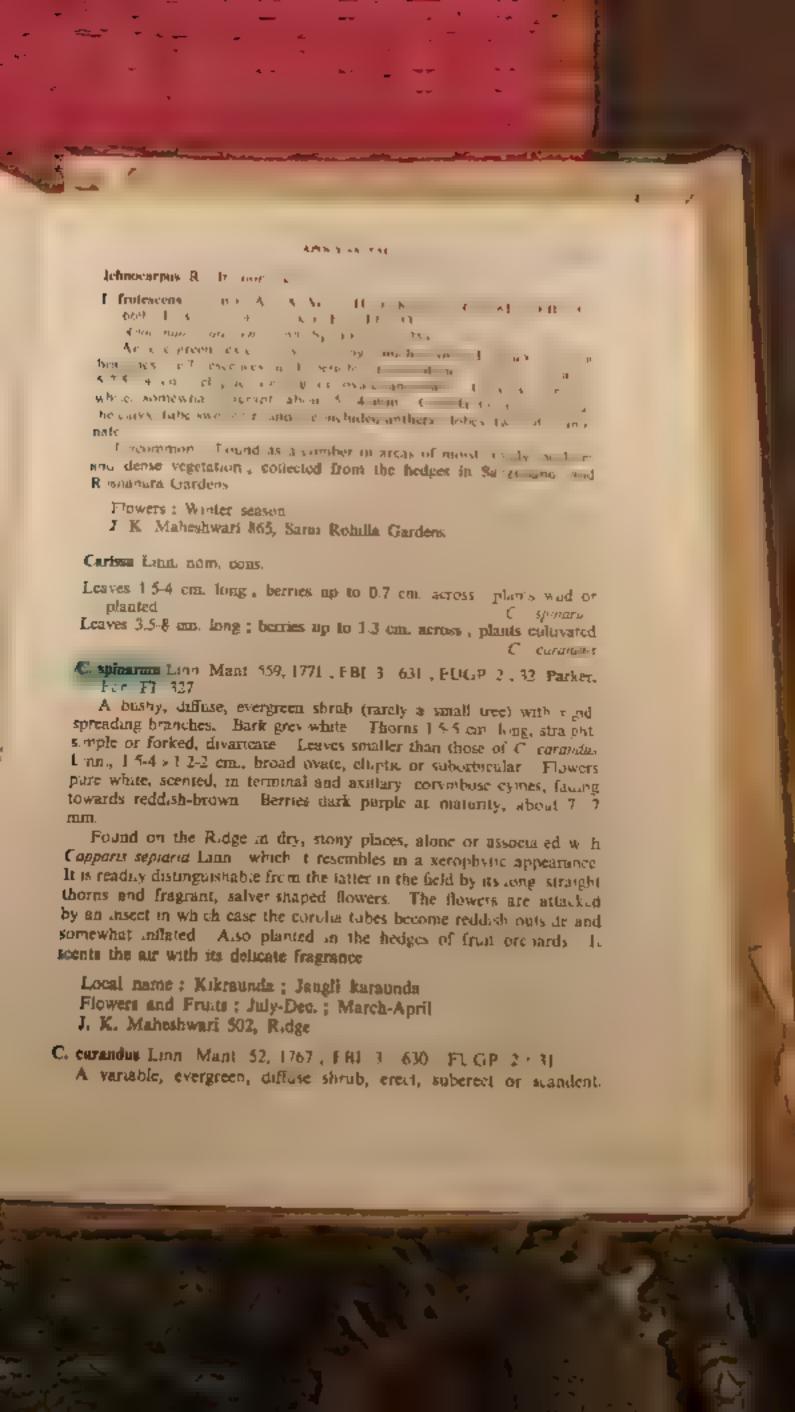
Ophioxylon serpentimum Linn, Sp. Pl. 1043, 1753

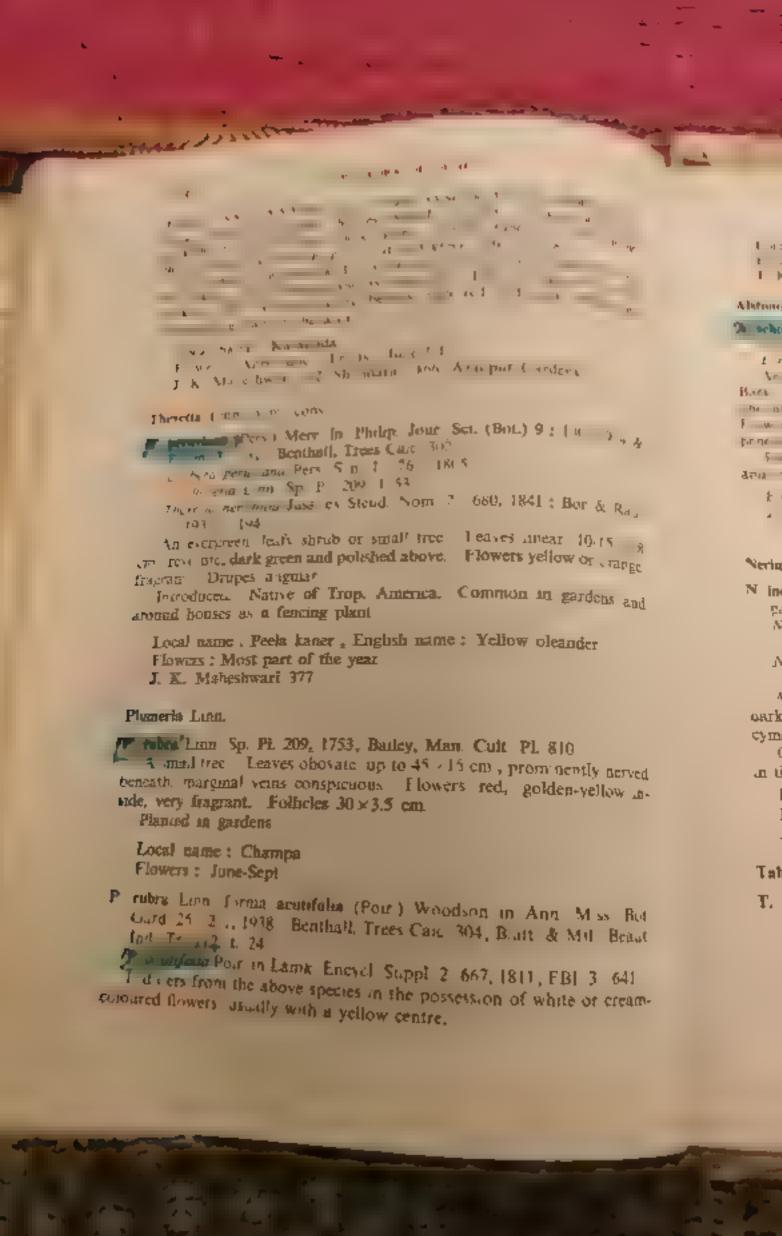
An erect, small shrub, branching from base up to 0.75 m tall. Stems lenticelia e, pale-coloured. Leaves elliptic-lanceolate or obovate to obtanceolate at pale beneath, in whorls of 3, 17-20 + 46 cm. I twers pik or rosy, in termina, or lateral, long-pedancled evenes. Pedicels and calyces red. Corot a inflated near the middle. Drupes dark purple about 0.8 × 0.8 cm., single or didymous.

Common in a semi-ward state in some of the Sabzimandi fruit on chards. The plant flowers and fruits annually and occurs as a shrubov undergrowth on moist or well, sandy clavely some of gardens where the borrya tapanca Lind! Primus persica Stokes Ps. diam gardens where the and A linas rapata Linn are grown. It becomes less common in January and February when the ground is dominated mainly by Ageic an invasive and February when the ground is dominated mainly by Ageic an invasive time. The local people make no use of this plant except that the leaves are given as folder.









 $\Gamma \rightarrow$ 

10 BACK Fra 15

F - W-

program

5 ara ·

10

Nerin

N in P

N

Ą

-(

oark C) In

نا به

Tat

T.

APPROXIMATE AS < No. Lower on one and accep-4towers I say I K Miller wire 1 pe Los Pig Alst unto R. Br. - in Pp The acholastic Lon of R. Dr. - No. 1 ... 1 816 1 11 1 1 1 tol 7 4 M trues 6 h x n d short 1 to blast 55 , h Brotest A creative mention mention their everyoon for a language way Buck pro white conver the disks in the part was a who are again proce point which a world a the end of amounts the agreem and with a compact umbehave comes. I die and pend was in a series Planted in gardens and lawns. The lates of the plant is seen as a and it thick as paste Flowers! Winter season. Fruits: March-lute. J. K. Maheshwari 629. Jamia Millia, Okhla Road 1387. anver 17 Lawns Nerium Lands N. indicum Will, Gard, Dict. n. 2, 1768; Merr. Enum 3 336 Santapage of RBSE 16(1): 170, 1953. N odorum Soland in Art. Hort. Kew. 1 . 297 1789 | 1 Br. 3 | 655 . FUGP 2:40: Bor & Rayz. 199, f. 198 N oleander Bianco, FL Filip. 104, 1837, 75, 1845, 1 140, 1 47, 1877 (non Linn.) A large evergreen, garden shrub. Leaves ternate binean anceo ale, dark green above. Flowers white, rosy or red, fragrant, in termina cymes. Commonly cultivated in the bedges of gardens. It thrives vigorously in the area and perfumes the air with its delicate scent Local name : Kaner : Chandna Flowers: Summer season J. K. Maneshwari 54. Tabernaemontana L. 110 T. divericata (Linn) R Br in Roem & Schult Syst 4 427 (819), Merr in Contr. Arti. Arti. 8, 140, 1934. Santapao in RBS1 16(1) 167, 1953 Nersum divarication Linn Sp Pt 209 1753 (quoad syn El Zev excl syn. Hermann) Tahernuemontana coronaria Willd Faum Hort Berol 215, 800 . FBL 3: 646.

Occurs on the Ridge. Easily confused with Wrightia finctoria R Br from which it is distinguished by absence of corona and included anthers

Local name : Kurchi Flowers : May-June

# Weightin R.Br

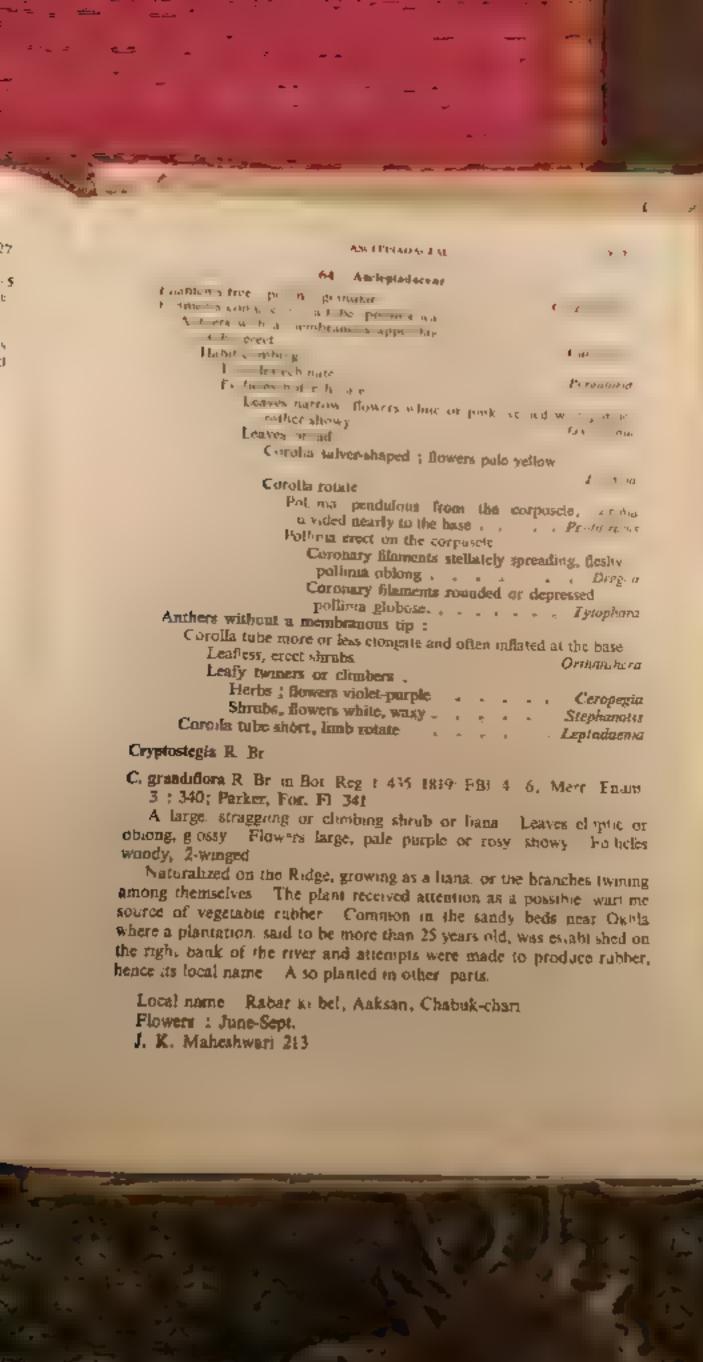
W tinctone R Br in Mem Wern, Soc 1 73, 1810 FB1 3 653, FUGP 2 38, Parker For Ft. 330, Santapau in RBSI 16(1) 168, 1953

A large shrub to moderate-street tree, branching from base. Bark grevish white. Leaves 6-13 - 4-8 cm., elliptic, el iptic-ob-ong or obovare. Young fo lage soft and sticky beneath, mature ones corraceous. Flowers while, scented, in lax, terminal, dichotomous cymes. Corona of numerous scales. Folioles deep green, 12-30 - 1 cm., pendent, joined. Seeds linear; coma basai.

A characteristic tree of the Rodge where it is common especially in depressed areas. On Oid Deihi Rodge near Hindu Rao Hospital it is seen to grow abundantly proximing a denser patch of trees. Easily recognizable by its greenish-yeilow leaves, white flowers with coronary scales and long, pendent forncles.

Flowers: May-Sept. Fruits: Greater part of the year J. K. Maheshwari 201, 519, Old Deshi Ridge





2. 6.

C process A + R Br + A+ F 11+ Kew 2 78 18

True 2 48 Pater En D W

dumbra Pared At Hat Ken I wis the An eres or decumber of the American terres Trace to orates blood or a place substitute pleasured on the 2 to be were water mook of a few columbs at me senting a terminal and and in a companies of the tented son all seeds that while

common in open waste, sindy, dry places. The leaves and I exare used in various body troubles. The coal from the fruits a used to CAY white Cama volumers. The leaves are componly infected by Cercospora 50

Local name : Ak; Akra : Ankta ; Madar

Flowers and Fruits : March-July J. K Maheshwari 24, Napafgarh

P. daemie (Forsk.) Blatt. & McC in JBNHS, 36(3) 528, 1933

Asciepias dienna Forsk fl Acgypt-Arab 51, 1775.

Perguiarus extensa N. E. Br. in Dyer Fl. Cap. 4(1) - 758, 1908 Daemia extense R. Br. in Mem. Wern. Soc. 1 50, 1810, FB1 4 20

A percannal, bad-smelling, hispid climber. Leaves subsucculent broad ovate, acuminate, deep cordate, 5-10 × 4.5-7 cm. Flowers ve ow ish-green or greenish-white, tinged with pink at base. Follicles curved backwards, softly spiny, 5-8 x 1.5 cm.

Abundant on the Ridge during monsoon months when it twines and spreads upon the trees and shrubs or spreads on the ground. Also found

in other parts twining on telegraph wires and other supports.

Local name : Aaksan

Flowers: March-Sept. Fruits: March-Oct.

J. K. Maheshwari 393

## Oxystelms R. Br.

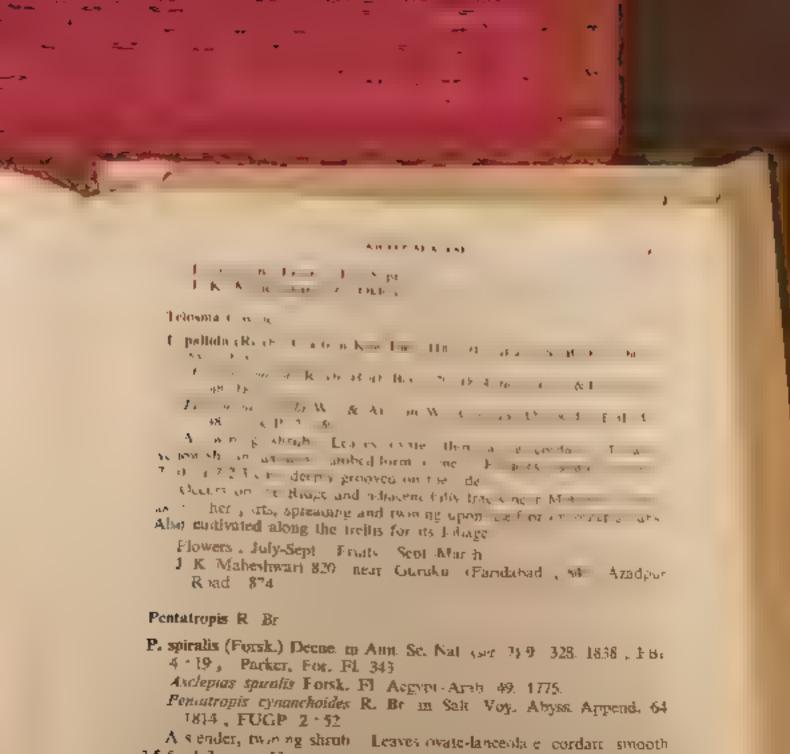
O. secamone (Linn.) K. Schum. in Engl. & Pranti, Nat. Pfam. 4.2).

Periploca secamone Lines Mant. 216, 1771.

Oxystelma esculentum R. Br In Mem. Wern. Soc. 1 40, 1810, FBI 17.

A glabrous twiner. Leaves thin narrowly lanceolate ustally 10 × 0.4 cm. Flowers waitish with purple. Follicles glabrous, 5-6 cm. long ovoid-lanceolate pointed

Common near Oak as a sandy alkaline soils, where it twines on Tumarix app.



A siender, two ng shrub. Leaves ovate-lanceola e cordatt smooth 2.5.5. 1.2 cm. Flowers greenish-vellow or pale ye ow pendent in umbediform cymes. Buds 5-cornered at base. Folioles giabrous ancesolate.

Occurs on the Ridge as well as in other paris, either twining upon the trees and thorny shrubs or spreading and (wining upon issert

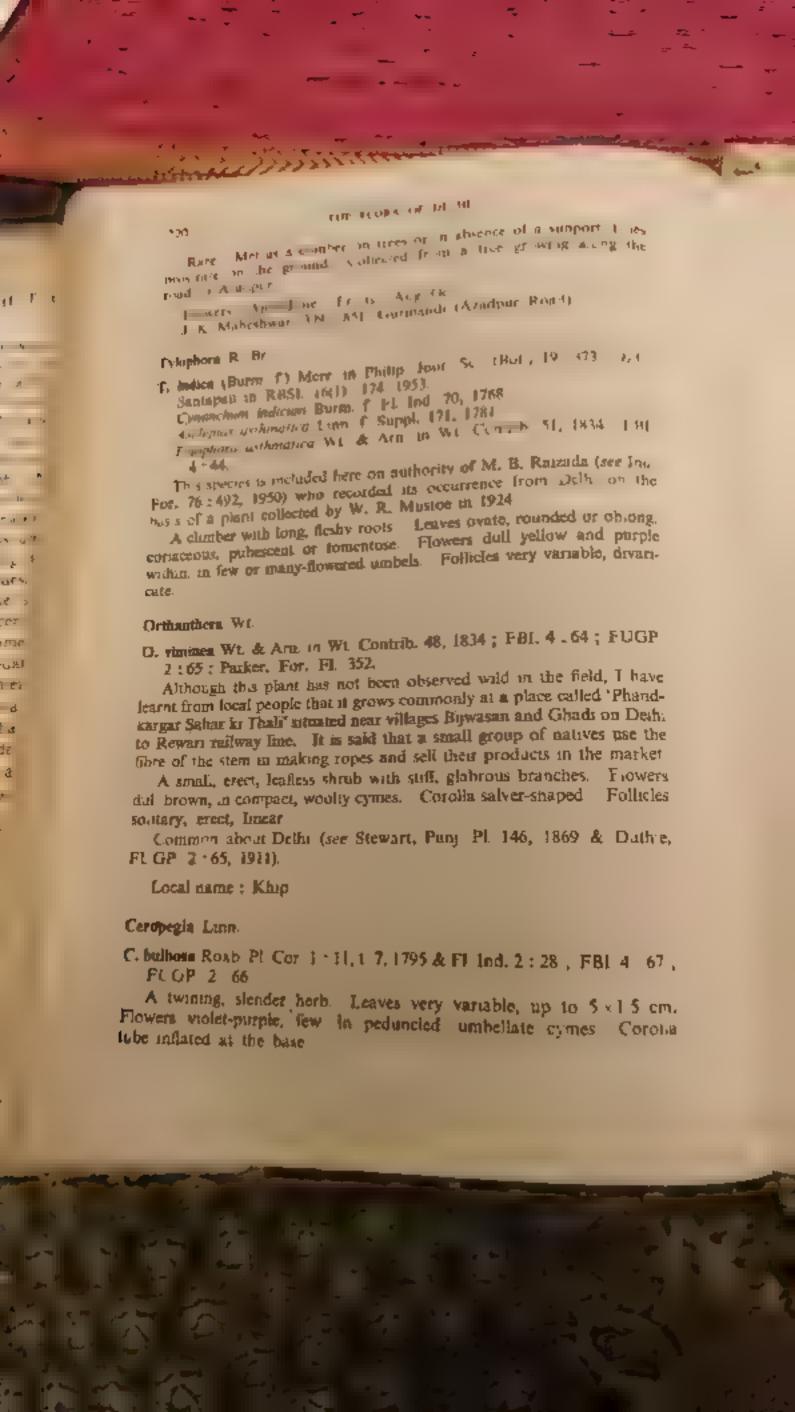
Flowers . July-Sept

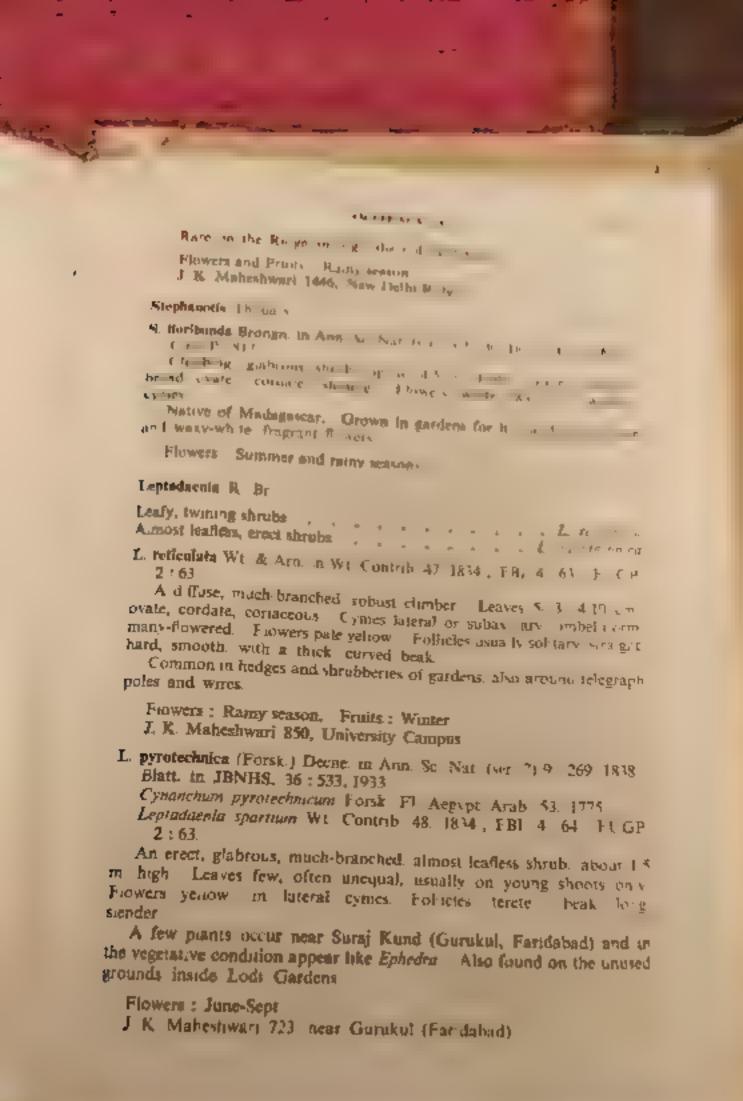
J. K. Maheshwari 718; 873, Okhla

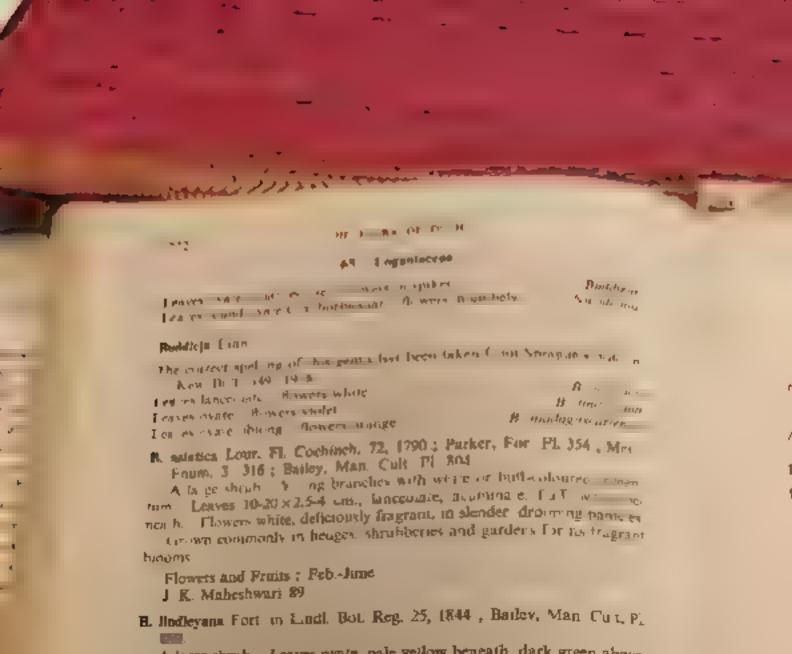
#### Dregea E. Mey, nom, cons

D. volubilis Benth ex Hook f in FBI 4 46, 1883 Parker For F1 349, Marsdonia volubiais Cooke F1 Pres Bomb 2 166 1904

A stout, woody, hoary-pubescent twiner. Branches rather densely sentice ate. Leaves 7.5 ±5 > 6.5-11 cm., broad ovate to suborb colar, cordate or founded, acuminate. Flowers green, in dense, drooping ambels which are sometimes several together. Follicles paired, divaricate, tapering from base, 8-10 × 4 cm.







A large shrub. Leaves ovate, pale yellow beneath, dark green above flowers purplish-violet, in dense, creet, long spikes. I orolla grandiar pubescent outside.

Grown in the abrubberies of gardens.

Flowers ; July-Sept. J K. Maheshwari 246

B. madagascariensis Lamk Encycl, 1 513, 1785 ; Parker, For Fl. 355 Bailey, Man. Cuit. Pl. 804.

A shruh Leaves ovate-oblong, deep green above. Flowers orange, in terminal panieles.

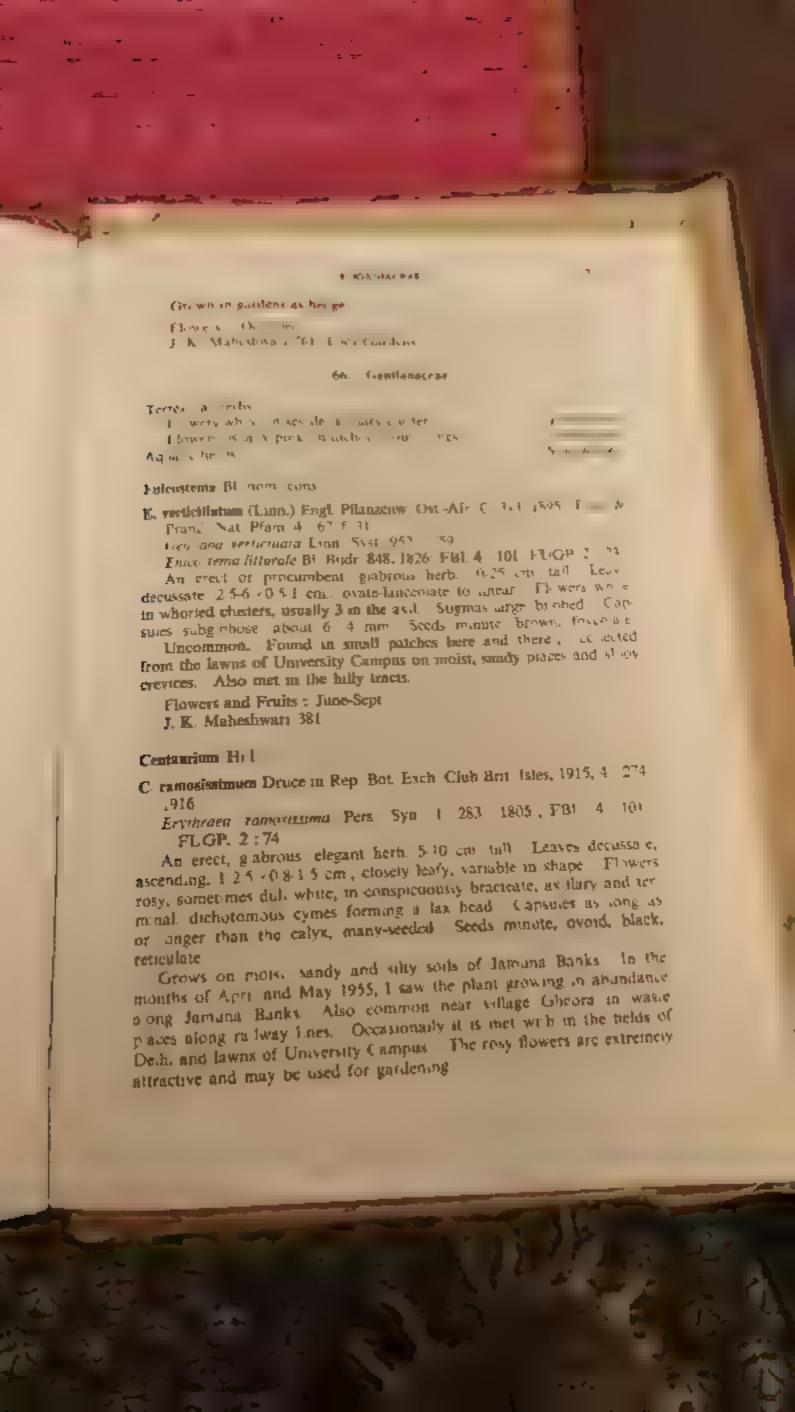
Grown in the shrubberies for its flowers.

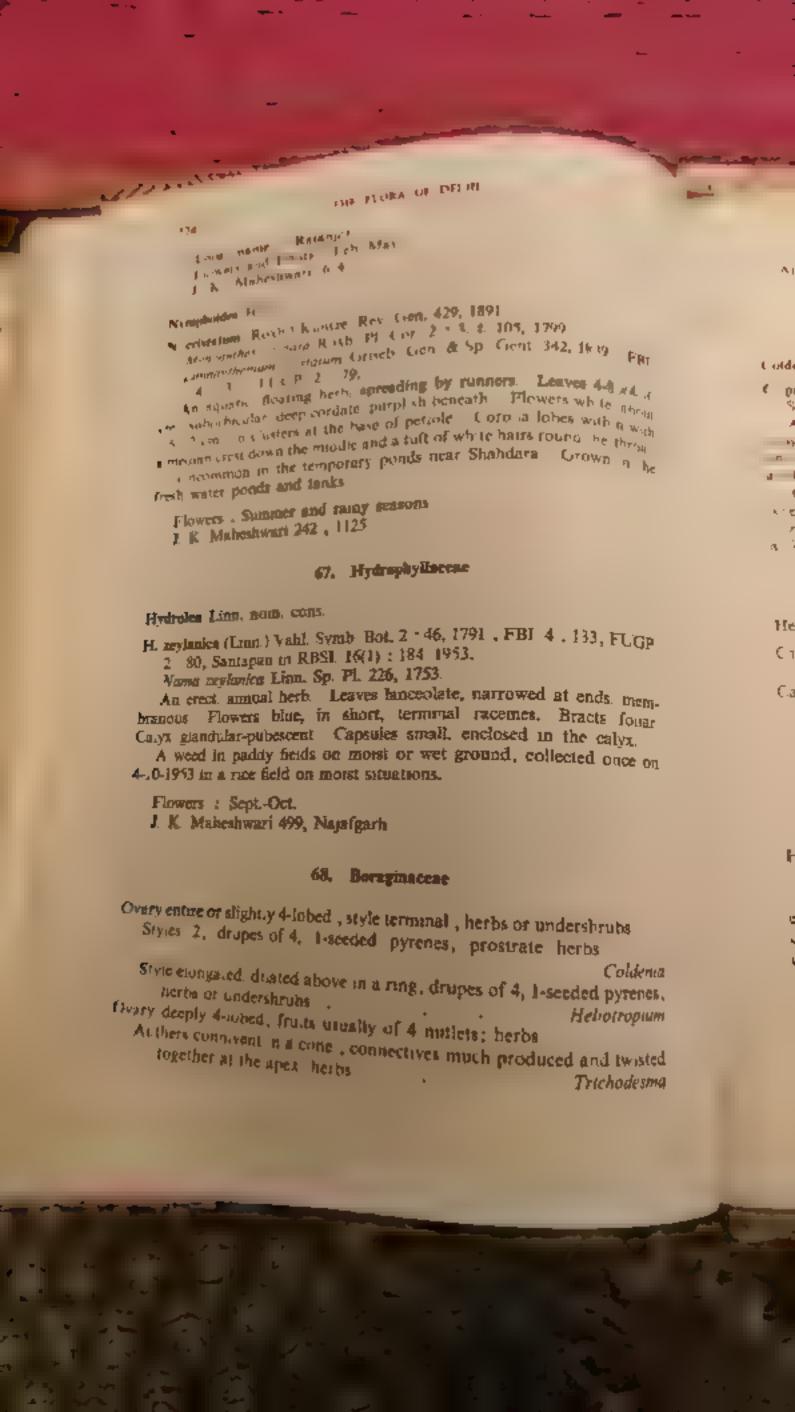
Flowers: Jan.-March J. K. Maheshwari 758

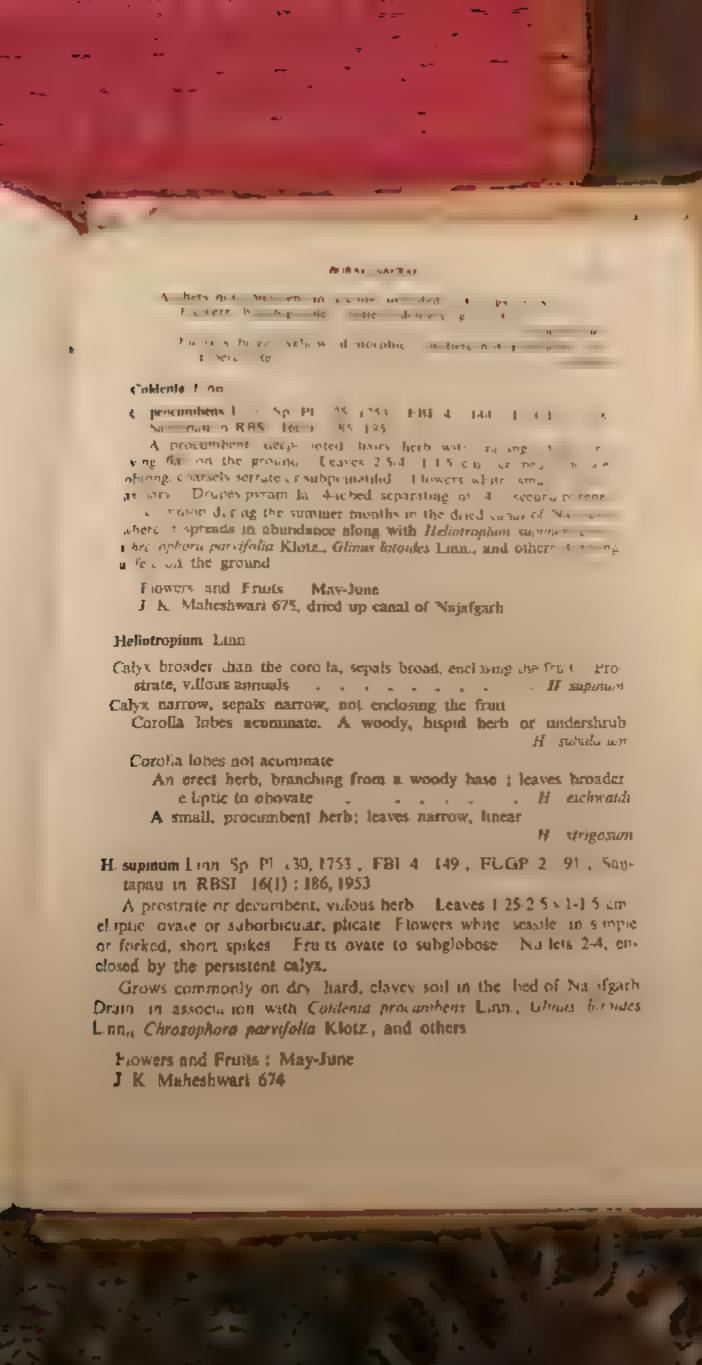
# Nicodemia Tenore

N. direntifolia Tenore. Cat Ort Napol 88, 1845. Parker For Fl 355. A straggling shrub with woody branches. Leaves round-ovale or subgroupedar, guibrous, usually lobed in the upper part. Infli rescence fusity-intentose. Flowers yellow, dull-looking, in compound as lary and terminal umbels.









If subulation Hochit et like Printe 2, 5 4, 551 (845, \$1.69.) 31 H continued in FBT 4 (48 min) in the Mile + 877 A words heroid nech or understands. Main tensione the prouter much hanches. Leaves 2 S. 6. 15 to mount why an employed the backed be C. c. lobet score to be spreadoble. Some c.4 tube ante or the land the wider service systems on rocky tends, manny on the IC dyn.

Flowers and Frield Aug April J. K. Maheshwari 635. Old Delhi Ridge 774 near comb i Fu dahau

H. elchweldi Steud, ex DC Prode 9 \$35, [845], [931 4 49 ] (,

An erect, rough, woolly-tomentose herb branching fr m a wordy hose Teaves 2 5-6 x 2 3 5 cm chiptic obiong or obovate, glubec e ch. Flowers white poired in thort, obracleste spikes, he word in he anex when young. Nutlets & ellipsoid found at ends, minurely vergue no

Common in waste places, gardens and fields in dry sandy or sandy. clavey seeks. A medicinal herb

Local name: Kadhera; Kameda; Karera Flowers and Fruits: March-June

J. K. Maheshwart 50. Timarpur, 871, University Campus

H. strigosum Wild Sp. Pt. 1 743, 1798; FBY 4 151; FUGP 2.93. Merr Enum 3 378

A prostrate or offen procumbent much branched, perenn a deeprooted herb | Leaves 0.8-2 - 0.15-0.3 cm., linear | Flowers white | Calve accrescent. Fruits globose, of 4 nutlets

Common in different situations ranging from a dry crevice to a moist shady place. A paste of the here is used for treatment of wounds between the finger bases

Local name: Panachum; Jhimkdi Flowers and Fruits . During and after raies J K Maheshwari [50, Okhla

# Trichodesma R. Br norn cons

T. amplexicable Roth Nov. Pl. Sp. 104 1821, FBI 4 153, Santapala in RBST, 16 (ed. 2): 147, 1900

Tout unit in var amplemente Cooke Fl P es B no 2 2.5 1904 An erect or diffuse hispid herb with a long tap root and balboushased at 8 hairs. Leaves 4-7, 15-25 cm, ovale, elliptic or lanceolate cordine or so a sample vicina. Flowers blue or violet solitary in leafarranged or extra axi ary leafy raceines. Corolla funnel-shaped. Nat. any or with posted on the back



5.0

Common on the Riege as we're in more and army mail ide if a

Flowers and Fr. st. After tary

1 K. Maheshwari 375 (the Lette Retue)

#### Cynog ostum | 1911

C. funceolation Forsk 1 Negro Nobel 4 to Nobel 1 negro to 1 negro 1 ne

Records to the first the state of the state

A weed occurring as an undergrowth in he from a book of the sandy-coayer and

Howers and Fruits : Aug -Sept.

J. K. Maheshwari 407, Azadpur Cardens

## Arnebia Forsk

A. hispidusitna (Lehm.) DC. Prodr. 10:94, 1846 1-BI 4 176; FUOP 2 97,

Lithospermun hispidissimum Lehm, Icon, Nov Sturp 1 39, 182.

A diffuse of prostrate, very hispid herb. Tap root red. 163 es 30.60 x 4-6 mm, lanceolate to linear lanceolate. Flowers yellow of yellow sh-white, in secund hispate spikes. Nutlets evoid con t, acute tuberculate. The plants are dimorphic with long, and short styled flowers.

A verophytic herb found in dry sandy or sandy-ciavey sous. The

red tap roots are used for colouring hair oils

Loca, name . Ratanjot

Flowers and Fruits Oct. and April

J K. Maheshwari 733, Lodi Gardens

### 69. Ehretiaceae

Style terminal, 4-fid; trees	*			4	ŧ.		Cordia
Style 2-fid ; trees or shrubs					4	*	Ehrena

#### Cordia Linn

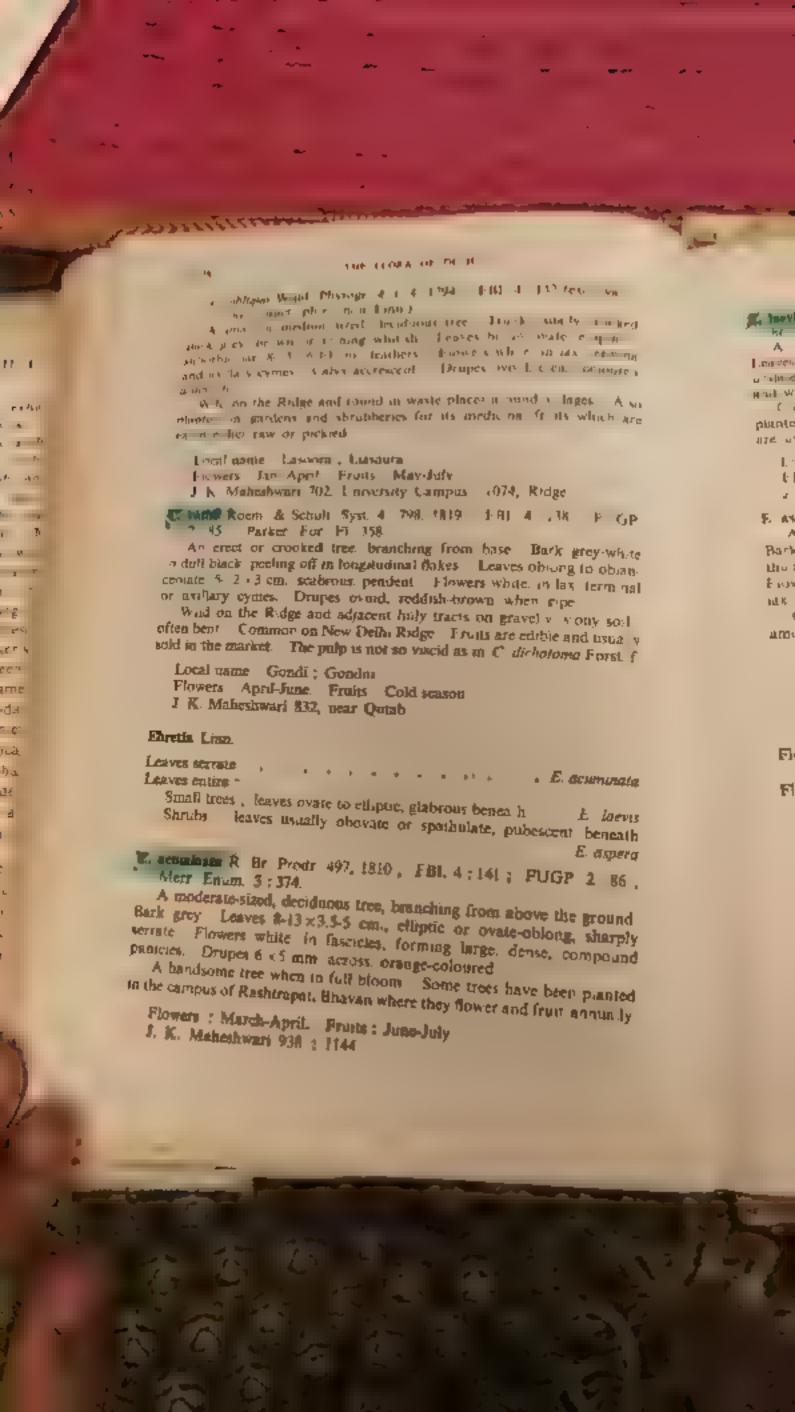
Leaves a ternate, broad ovate ell pric to suborbicular with basal nerves.

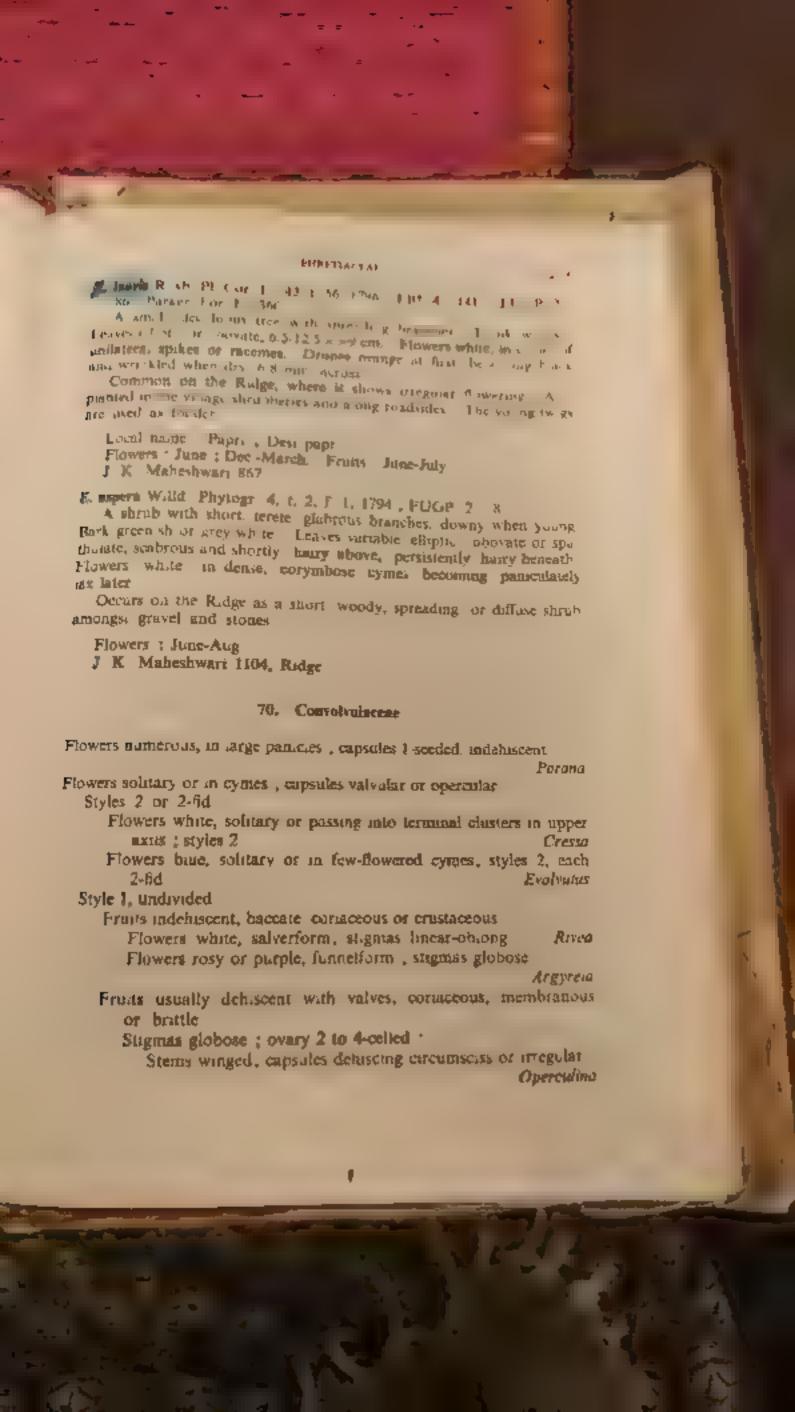
C dichotoma

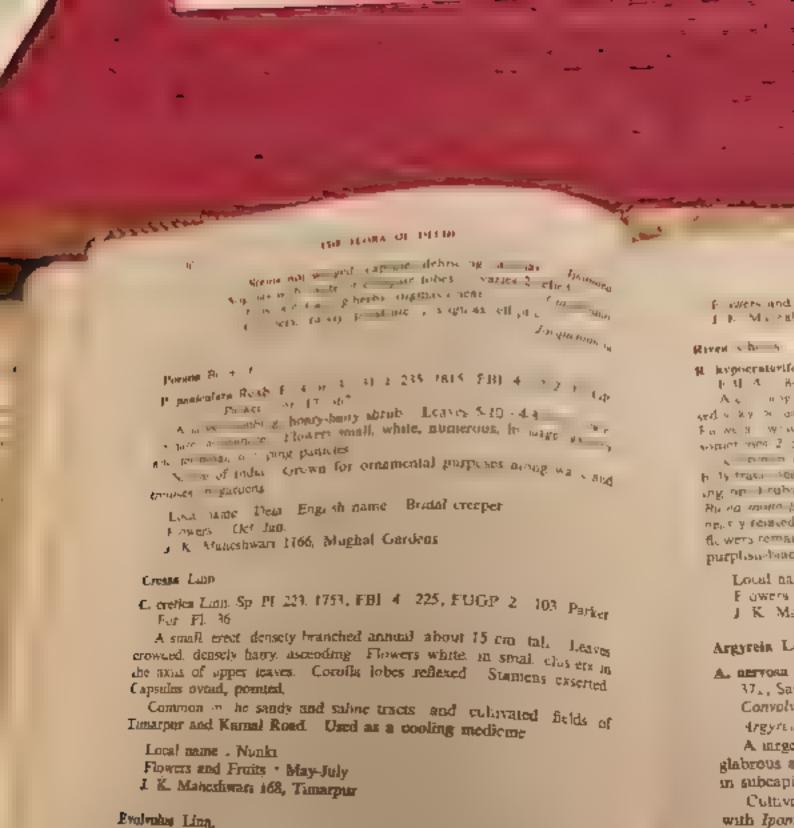
Leaves subopposite oblong to oblanceolate, with no distinct, basal nerves

C. diebotoma i orst f Prode .8, 1786 . Merr Enum 3 373 . Santapau in RBSF 16(1): 185, 1953









E. akinoides Linn. Sp. Pl. 392, 1762, FBI. 4 : 220 ; FUGP. 2 : 104 ; Metr. Enum. 3: 357; Santapan in RBSI 16(1): 190, 1953 Convoludus alsinoides Lun Sp Pt 157, 1751

A spreading or ascending much-branched, densely hairy herb Branches several from a wood rootstock. Leaves dist chous, clothed w. h appressed pubescence. Flowers 1ght blue or blue, in 1 to 3-flowered, axiliary filtiorm pedancies. Capsules 4-second Seeds arregular, gia-

Common throughout on moist or dry, sandy soils. Occurs on the Ridge in gravelly son or in the crevices of stones.

J. D. MARKET

River che

A hopogratuation p 41 4 8-0.29 ged a ky or or For NE S 14' 44 ANDREAD PROPERTY V D. 10 . 17 h 14 trace - too

> purplishedman Local na E awers

> Argyrein L

37. Sa Convolv ATRYTER A mage glabrous a un aubcapi

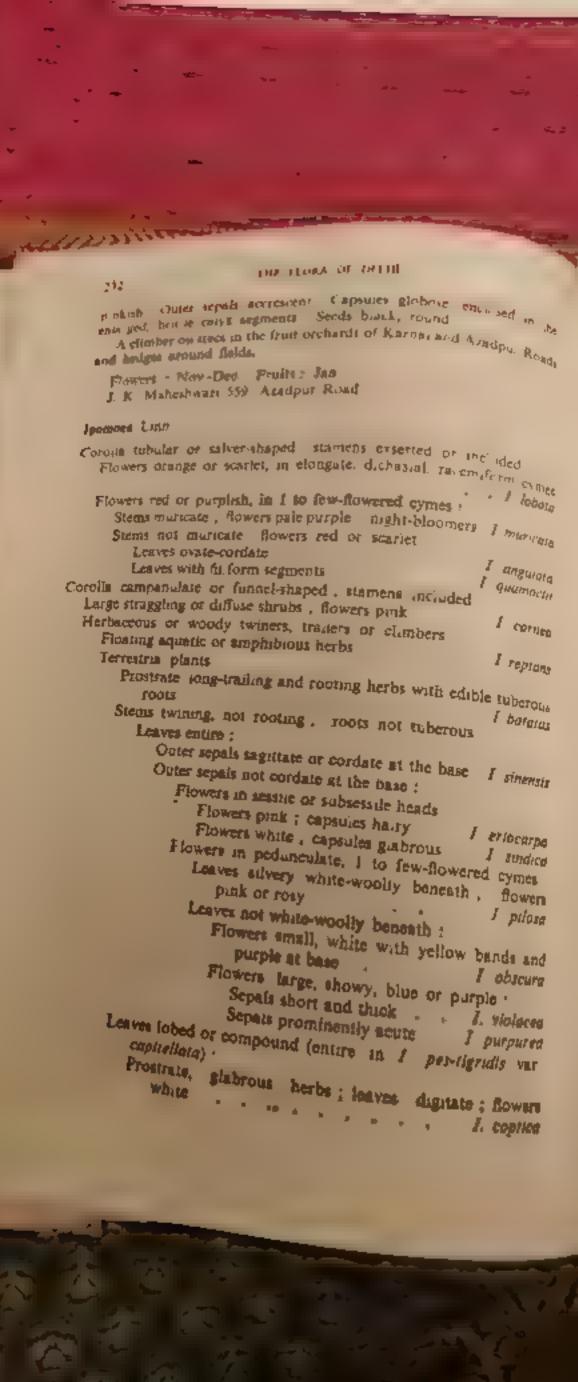
> with *Ipon* latter, sic

Loca.

Operculia O. turpet FUG Солу Inom

> A 81 ovate to doweres

MEG CORP. O'STANISH tto a fined by the 1 2 7 5 dillo J. K. Maherhane 34 Haw Khas 125.12 Maken Cours R happendent formis has an Allon Sas Obs. Ones of the set so led at 84 of the CP 2 has Pake that the set set so Allon has been shown been been at the set of the set Ъ someth white came account usually editory axillary some e so nel con la mile de action. Estats giulle se Common near the Marka View on the Ridge. Also build to be the cases near Crorokal are dahado and Mehrapha cit along and meaoy a chembrand week in the area near Gurukul, if a firm of the second Bures more specima Laub, and beace its total marks. The plant is very ness y related to Rivera ornata Cherry and needs field observations. The flowers remain closed during the day. The seases of detached plants farm purplish clack Local name : Dhak ki bel ; Amarbel Flowers \* Aug.-Sept. Fruits : Oct.-Nov J. K. Maheshwari 1147, Mebrauli, 1232, near Garukul (Faridabad Argyrein Lour A. nervosa (Burm. f.) Boj. Hert. Maurit 224, 1837 ; Metr. Emura 3 371, Saatapau in RBSI, 16(1) 194, 1933 Convolvation nervosus Burm, f. Fl. Ind. 48, t. 20, f.1, 1768. Arxyreia speciosa Sweet, Hort. Reit. 289, 1827; FBI 4 185 A large climber with white tomentose stems. Leaves ovale cordate glabrous above, densely white-tomeniose beneath. Flowers rosy-purple in subcapitate cymos. Bracts large, foliar Cultivated for its handsome flowers and foliage. It is often confused with Ipomoea carnea Iacq, which is also cultivated in the area. In the latter, stems are fistular and leaves are glabrous on both purfaces Local name : Ghabel, Sansa Opercultus Silva Manso O, turpethum (Lion ) Silva Manso, Enum. Subst. Bras. 16. & 49. R36. FUGP 2: 110; Metr. Eaum. 3: 363 Convolvulus turpethum Linn, Sp. Pl. 155, 1753 Ipomoea turpethum R. Br. Prodr. 485, 1810 A stoat, climbing perennial. Stems augled and winged. Leaves ovate to oblong, cordate or truncate at base. Howers white, in fewflowered cymes. Peduncies stout. Bracts large, subpers stent, often



11

1g

10%

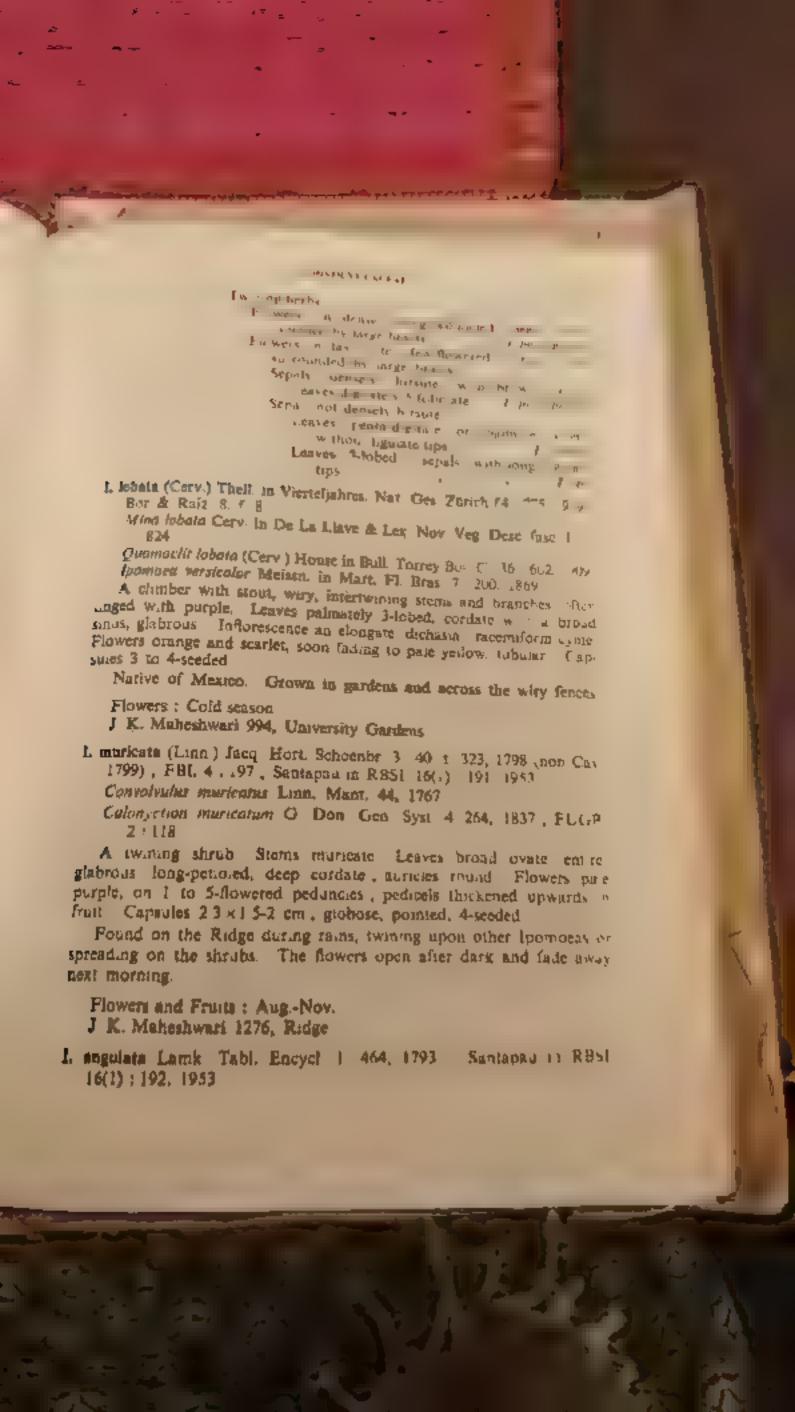
i)c

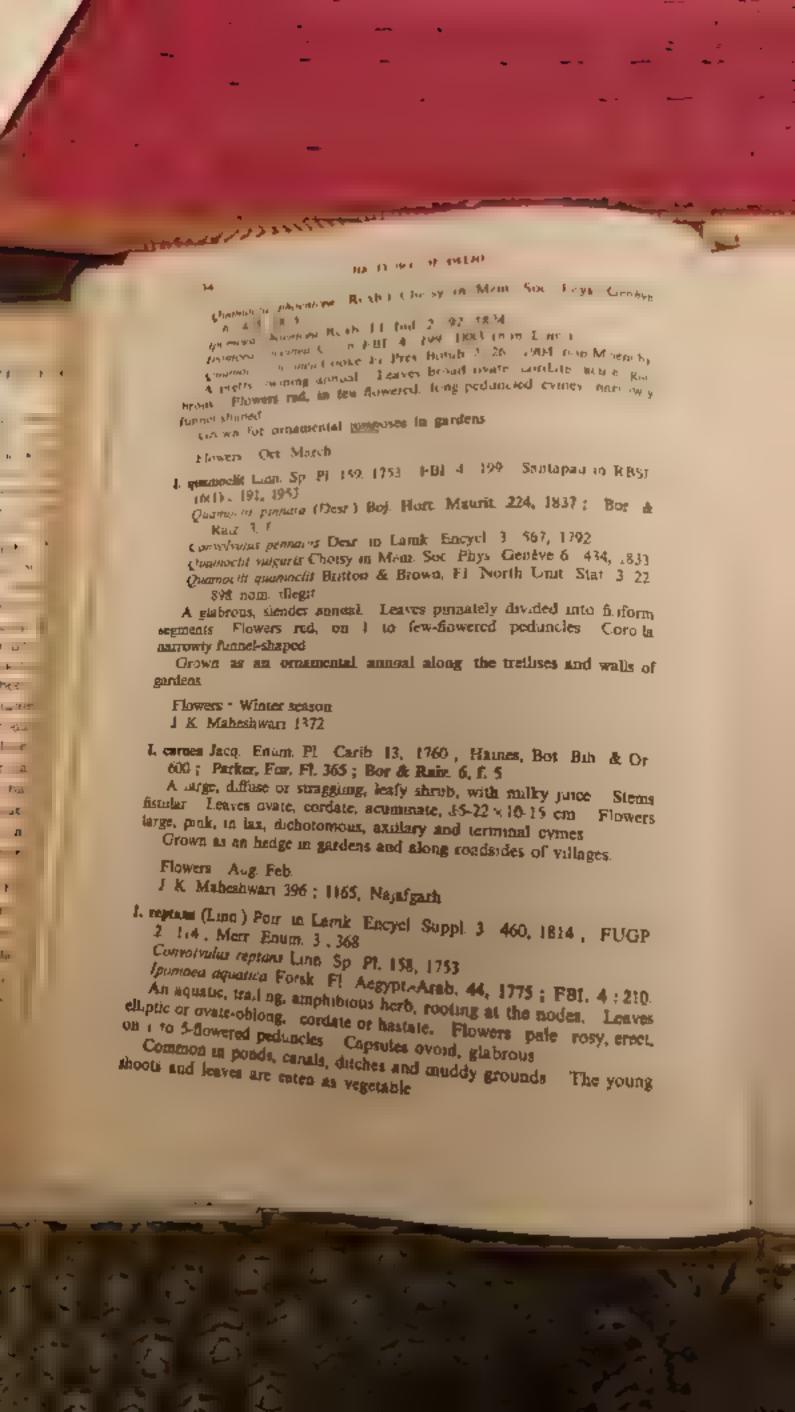
d

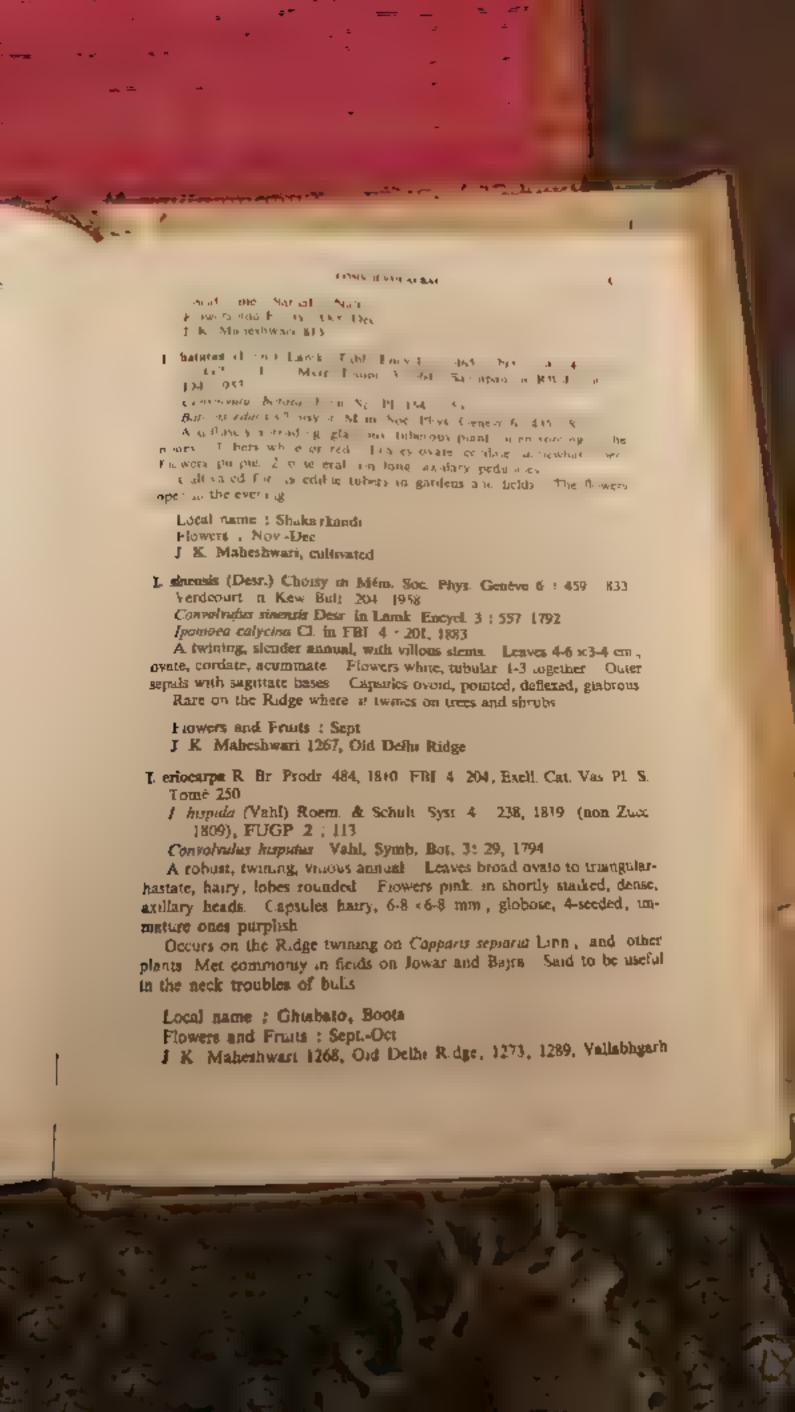
Ç

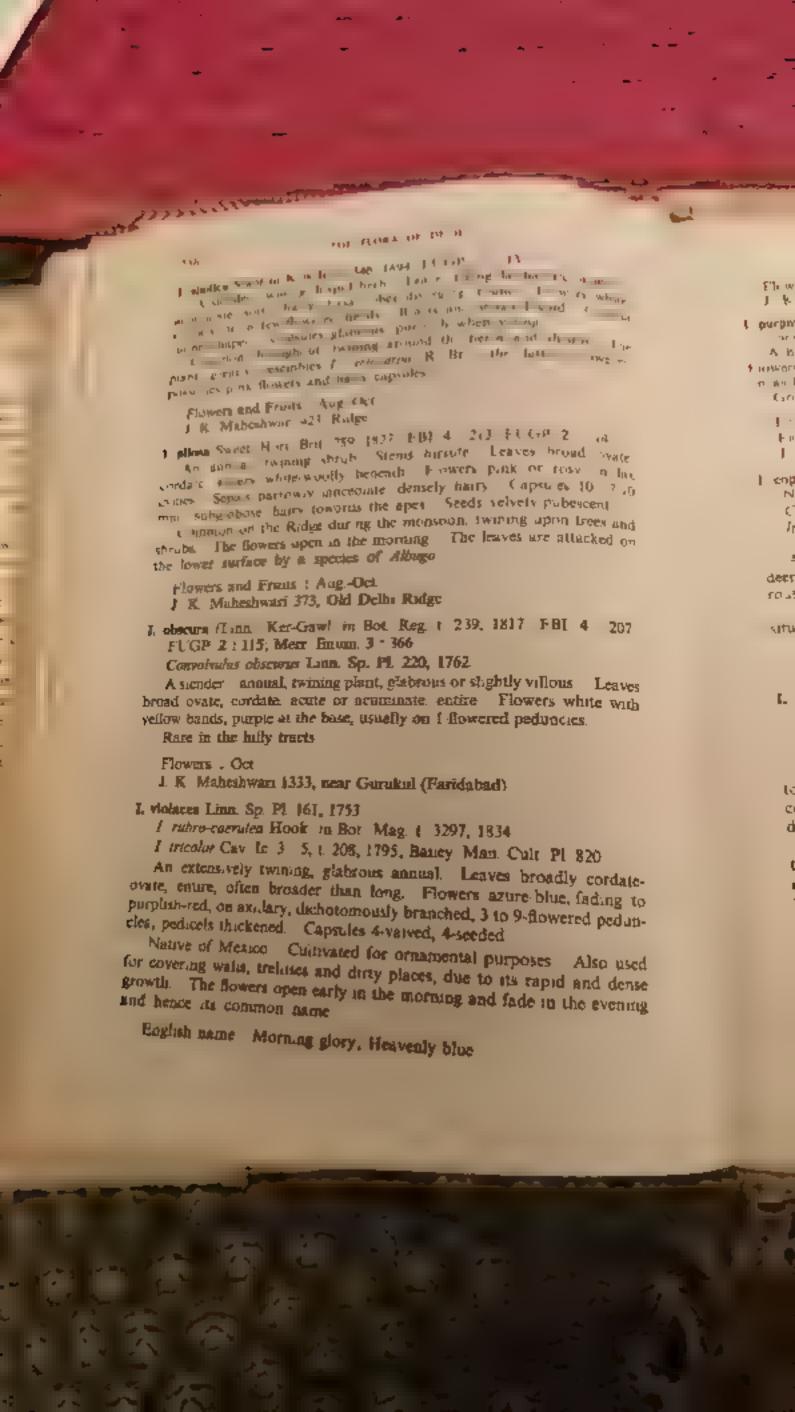
rt.

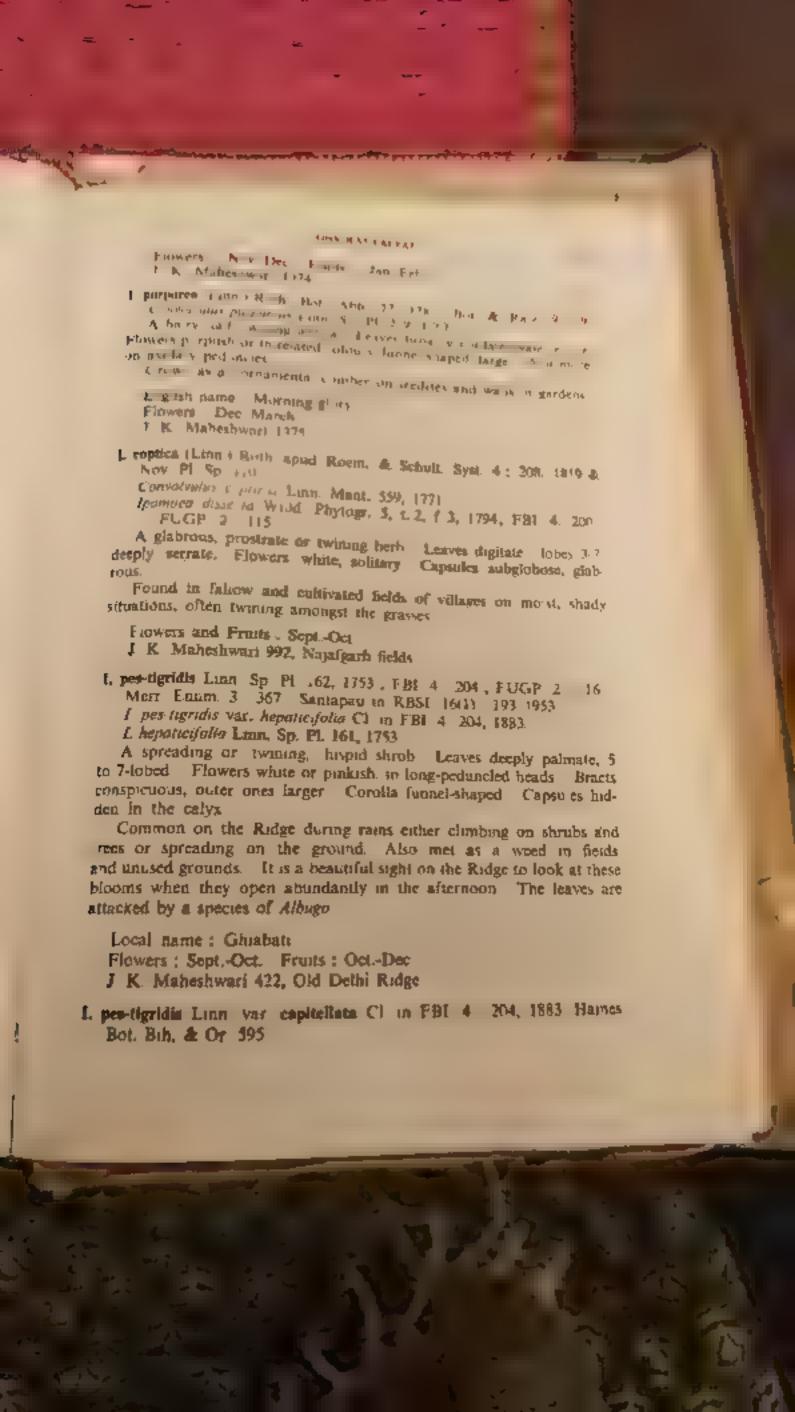
1.41 5

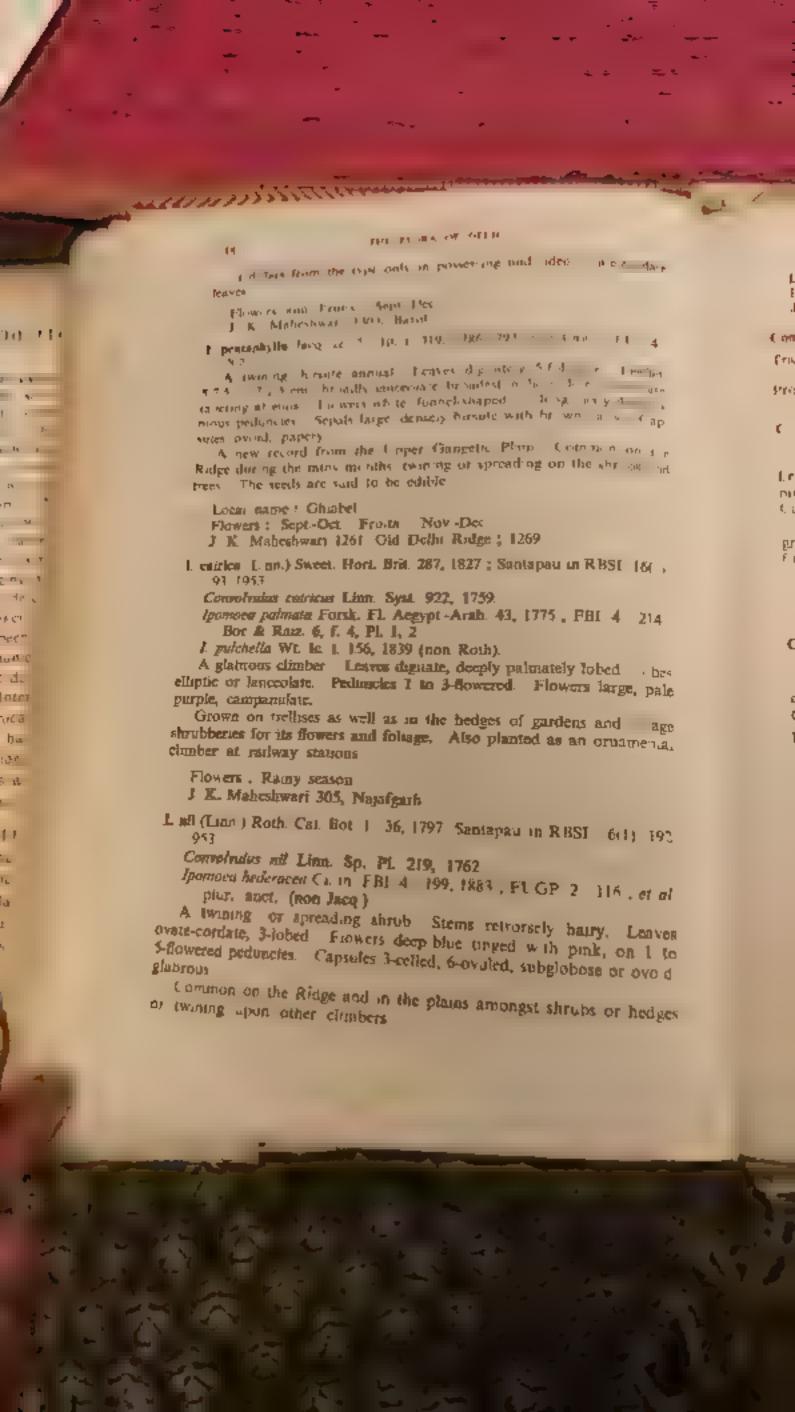


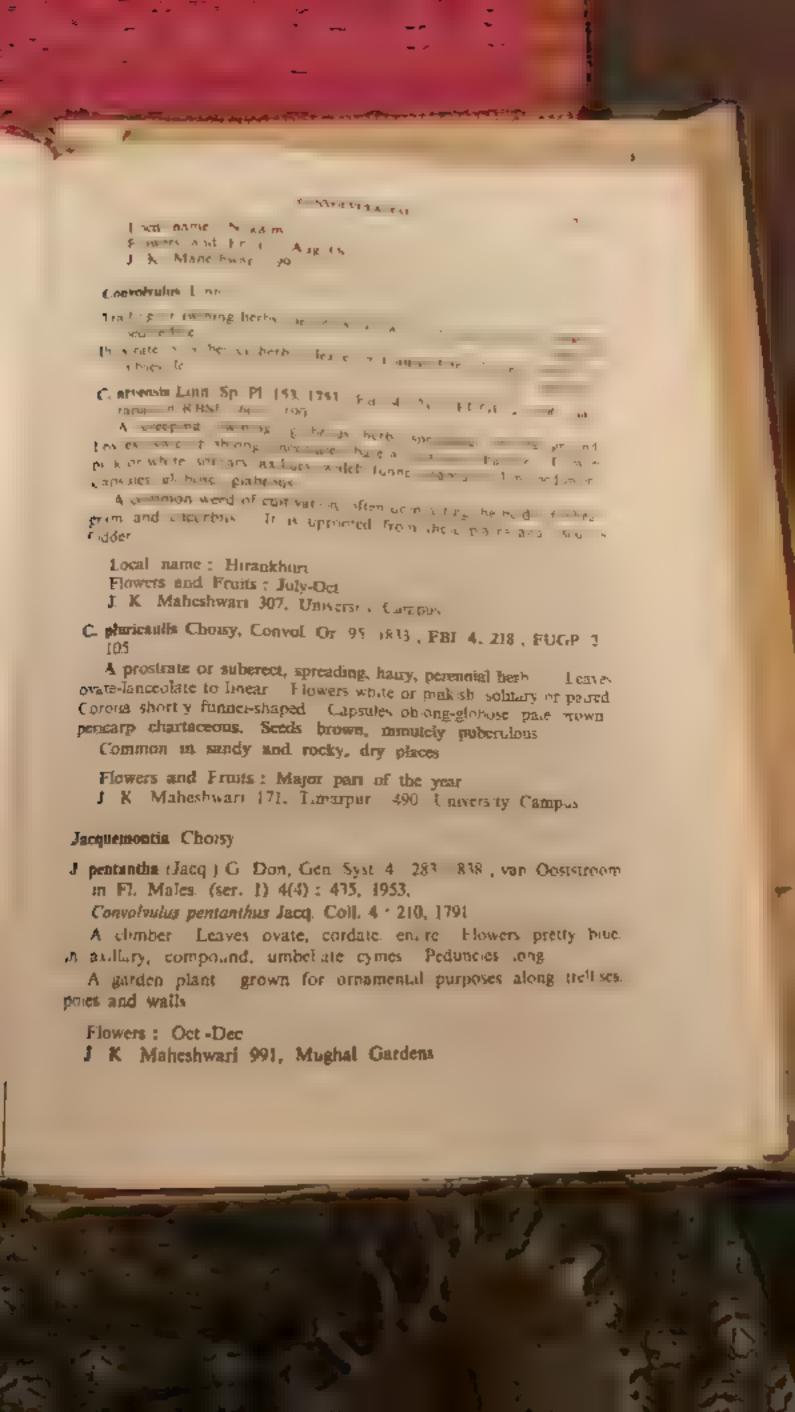


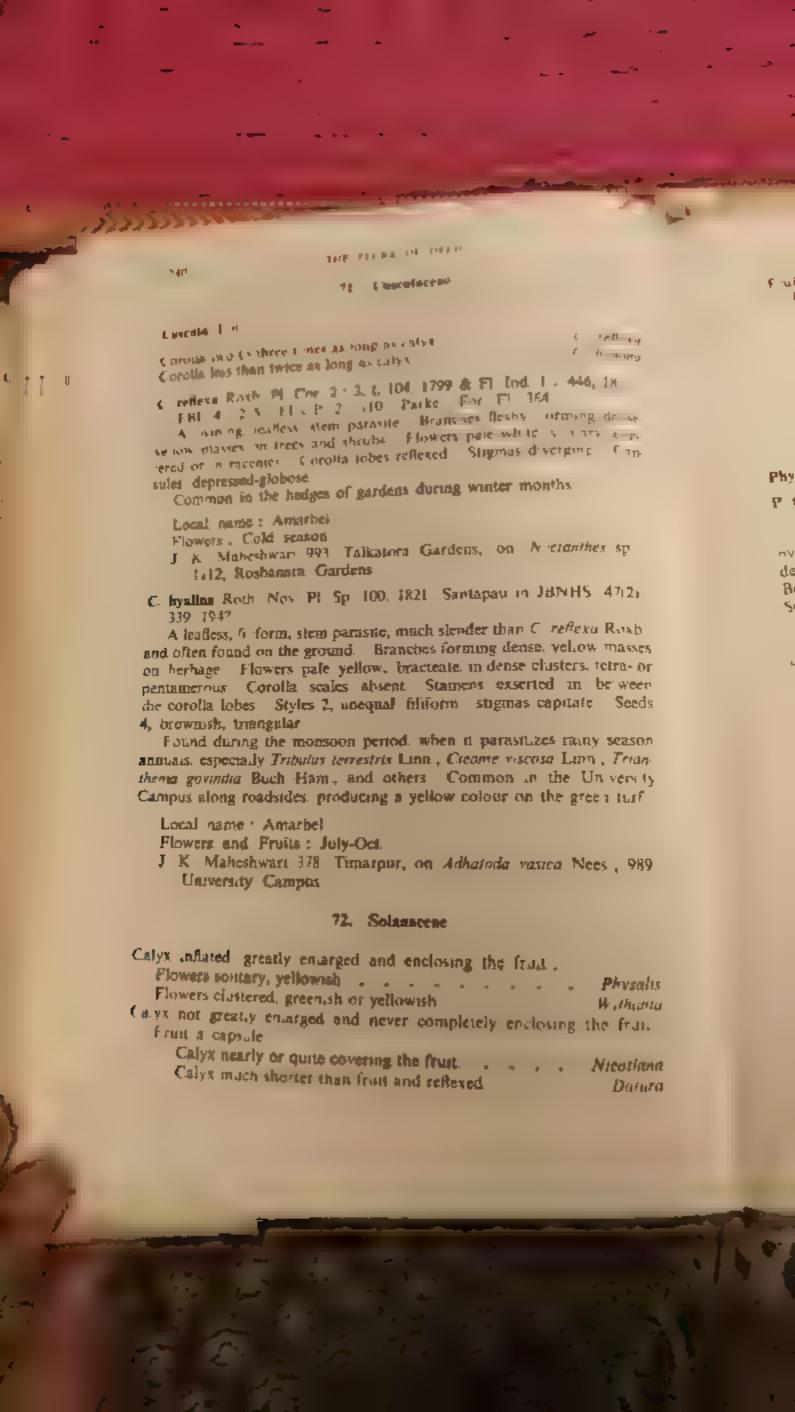




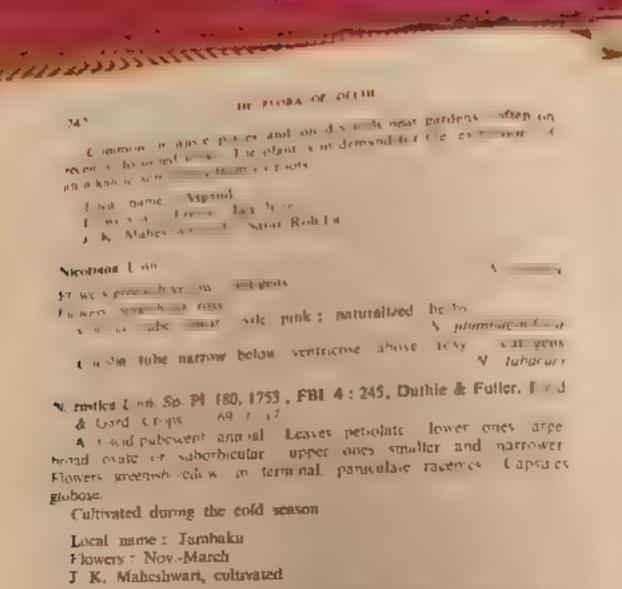












tan ed.

a Nower

14

11

Calu

Florida.

6

 $\mathbf{p}_{\mathbf{k}}$ 

Đ

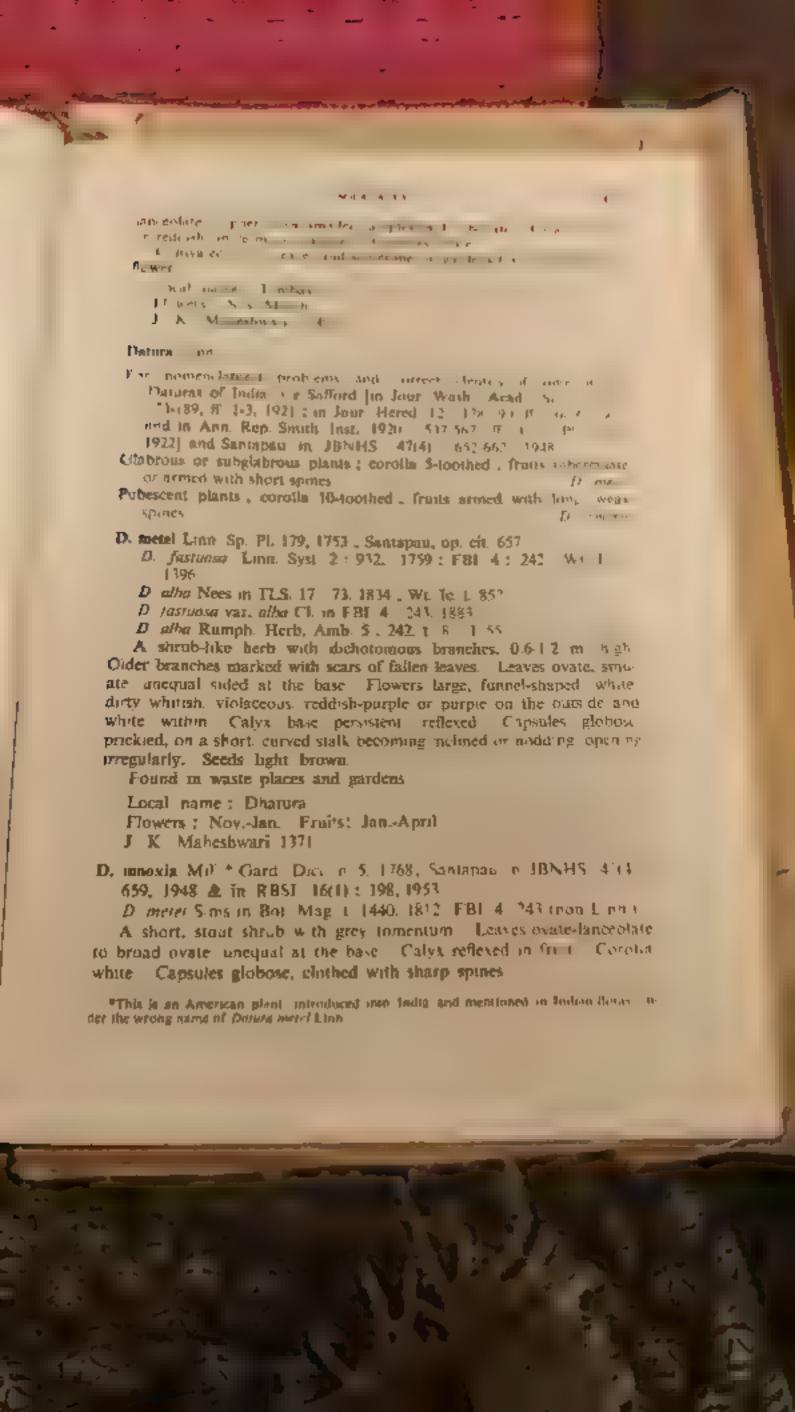
N. plumbagmifelia V v. Elench. Pl. Hort. Dinegro 26, 1-5, 1802, Hautes. Bot. Bib. & Or. 616

An erect, shallow rooted herb, sticky glandmar throughout, up to 0.6 m tal. Leaves forming a rosette at base upper ones e liptic, ovate-et ptic or lanceolate, stem clasping; rosette leaves much larger than the captine ones. Flowers pale pink, in distant, lax racemes. Corolla tube long, linear. Capsules about 10 × 6 mm., ovoid

A new record from De hi State. An introduced weed from Mexico and West Indies. It has become naturalized along roadsides, canal hance in st waste studious and cultivable ground. Common at Okhia and near the Jamuna Bridge.

Local name: Jangli tambaku
Flowers: April-June Prons: May-June
J. K. Mahtshwari 97, Roshanara Gardens

N tabacum Lann Sp. Pl. 180, 1753 FBJ 4 , 245 , Duthie & Faller, op oit 69 ( 16 Santapau in RBS) 16(1) : 199-1953 An erect large vacid annual Lower leaves large, oblong or ovate-



244

Common near are exacts and open waste places. The leaves a e-

irred a meets are the reties in the mi-

Lorin name. Ohar ica havers and he are been lan-A K Mine-liver 563 Shahdani

Solomon Line.

S. grandiflorum

Small Frees Herbs, undershrubs or shrabs

Plants pearmed R sots with tubers

- tabrenson;

Rios without tubers, flowers white

5 W. CLAIM

Plants gemed with practics texcept 5 melongena which may be armed of noth:

Presstrate or ascending herbs with long, stra ght prickles

5 aurattense

Freet shrubs or undershrubs or herbaceous (in S. melangena) Flowers violet or purple, 2.5 cm, or more across

Bernes globose, yellow turning to black calyx usually prick y Bernes round, oval or elongate-cylindric; calvir not prickly enliquees \$ melongeno Flowers white, less than 2.5 cm across; undershrubs or

shrubs ; leaves without prackles S. Jarvian

K. grandiflorum Ratz & Pay." Fl. Perny, 2: 35, t. 168, 1799 : Blatt & M li. Beaut. Ind. Tr. 134, L. 28.

S. wriginā Benth. Fl. Hongk. 243, 1861

A small sparsely thorny tree about 6 m tall brunching near the ground. Stems grey-white with longitudinal wrinkles. Leaves fleshy 8-23 × 6-12 cm., tomentose, rough, deep sinuate or fobed prickly along veins and often on lower surface. Flowers deep violet, in extra-ax dary.

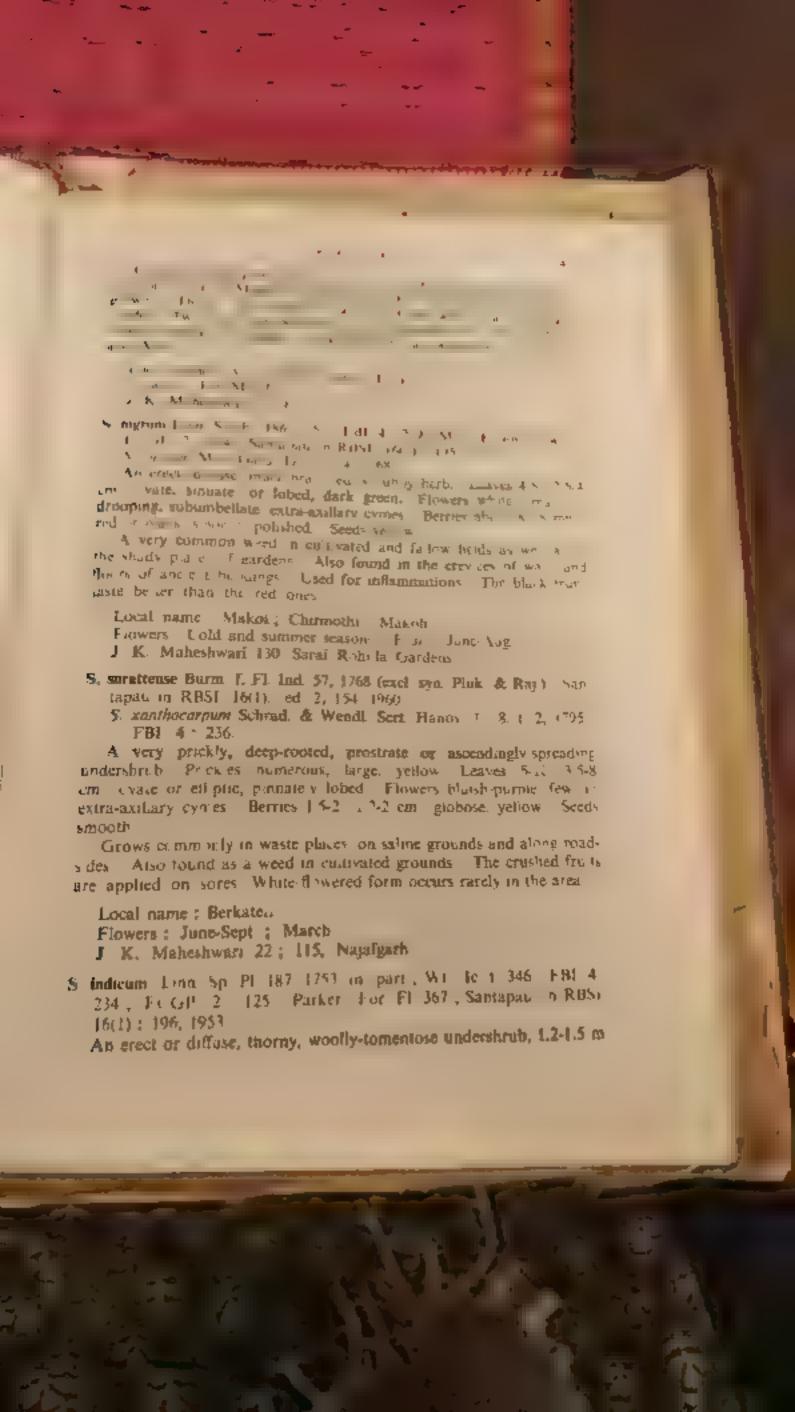
Introduced Planted in the hedges of gardens est away the flowers and no fruits could be observed. The ants often

Flowers : July-Aug J. K. Mahenhwari 1128

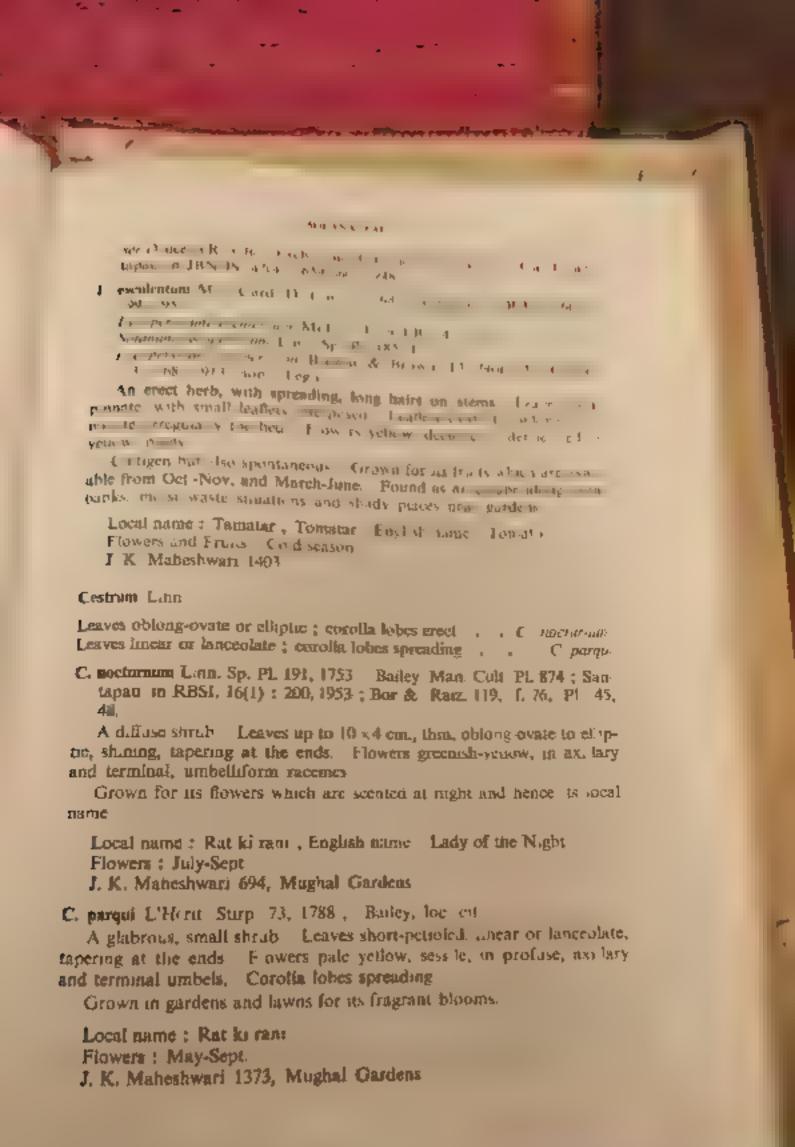
5. tuberosam I on Sp Pi 188, 1753 FBI 4 229. Du hit & Fuller op cit 3 15 Santapau in RBSI, 16(1) 195, 1953 A herb 0.3 to 1 m. tail, with underground, stem tubers. Leaves

odd-pinnate with 3-4 pains of entire leaflets. Flowers white to bouish, in forking clusters.

The tree is or rendering amount in India to S. morrowthum thints! even Watt. & Mill. Inc.



THE TOTAL OF DELEM ate the polymer tised to the or bounded Leaves 5.8 25.4 mg all the properties and man pounds a treating along the reading the final and the same subsections of the man and the course of the same subsections of the man and the course of the same subsections bed and the destroy of the state of the same that the same the same that africal 2.5 to gly horse course training to course of 25 ment to marke the places in the next way, in of the hot the mouths be tenses became fred whater an he and a set a set only secreptates as pentance. The second are no 1 475 Ph. No be to the first ŧ con the c. Karet. Karet. ha surprise The spackator. Lines. Lawren Job fruits June I K Maceshoar 140 1176 Sugargarh Canal Banks Mely 1 att pp 2 3 427 Santapsia, los col ye' S evalention Dunal, Hat Sonan 208 1813 An erect or diffuse understirub prickly or not Leaves up to 5 9 ah , a orace amuste or a bed pale beneath, grey-tomentose, Flowers bB violet or bands, in extra-axidary cymes Berries round, ova, or e men ecylindric, deep purple crown as garden vegetable for its edible fruits. Three sowings are made during the year in Deshi State—(1) February, (2) June and (3) Octo. her so that the feures are available in the market from April to October € Local name : Baingan ; English name : Brinjal Flowers ' July-Sept. Fronts : April-Feb. J K Maheshwari 355 ( S. torvum Sw Prodr 47 1788 FBI 4 234, Harnes Bot Bib & Or 5:2; Sentapau in JBNHS, 47(4): 654, 1948. 5 indicum Linn. Sp. Pl. 187, 1753, in part S stramonifolium Roxb Fl Ind 1 572, 1832 (non Jacq ) An erect branched shrub up to 3.5 m tall. Stems, branches and putales sparsely prickin and woolly-tomentose. Leaves up to 30 - 8 in smaatery lobed, without prickies. Flowers in extra-axillary, dense, short racemes. Herries about 1.5 < 1.5 cm., globose, much exceeding the unarmed caryx lobes Common in moist, shady places of Sabzamandi and Sarai Robbia frait rehards, apparently running wild Louis name . Ranabaingan ; Bhurat Flowers and Fruits . Aug -Dec J. K. Muheshwari 1348 Lycupersicon Mill In the correct generic name Lycoperation and not Lycoperateum,





7 4

Lycium I -e

L europagum Lin Sp. Pt. (92 1 51 4 H. 4 30 F. C.P. 2 29 Parker For F J. 370 An erest bent thorns bustos de f. S. w. w. t. Branceners the response cleaves analyte in shape ( 5 to 5) by the or store late. Howers white, political fraction shaped. Br.

a springer reduces red

Continuou rethe duet rico actoural Melongo and ther concravely sorts. Also found bacquing like Capput. decided Filmen. in p. the cres ces of walls of ancient bioldenya-

Loca isone Chirchitta : Khulai , Chirmeta Frowers and Fruits , Oct -March J K Maheshware 209

### Capsicom Linn

nor description and figures of the various species and variously of capacium cultivateu in India see F. J. Shaw and A. R. Knar. n. the Types of Capticism" in Mem. Dept. Agric. Ind. (Bot Ser-.6 . 59-82. tf 2-5, 1929

C. annuam Linn Sp. Pt. (88, 1753) Duthie & Faller Field & Card Crops 3 36

A shrubby annual aerb. Peduncles soldary. Flowers white drooping Betries 5-13 can long, much longer than broad reflexed red or

ve how mildly pungent

Cultivated during the rainy season for its useful fruits in the urban areas. The dried fruit is used as an ingredient in curries and other food preparations. The green pods are pickled in Delhi the v age Narela s a famous market for challes. The following cultivars are grown Collissat Spanish Grant, Golden Queen, Ruby King, Bu Rose, Sunns Brook and Pamento

Loca, name March English name Chillies . Red peoper Howers and Fruits; June-Oct J. K. Maheshwan 25

## 73. Scrophulariaceae

Leaves all alternate corolla subrotate flowers yellow Leaves all opposite or the lower only . Verliascum. Corolla sparred or saccate at the base in front . Flowers white or pink sh , corolla saccate in front ... Antierhinion

Flowers yellow, corolla spurred in front Kickxin



Charles Shares cor La not spurred conservation (1) by you yes. Corolla tube very ong an inc. a. Concess helps to be by the See 1954 Corcla In thy Thoppen Enthers I collect has a w Amthera 2-celled , leaves shortly part at . I may vellow I havers blue, purple, prok or an er or a Corolly throat 2-lobed to the party Corolla throat not lobed on the party 1 4 Corolla not 2-hpped Calya 5-partite; upper sepal longer and broader tost others ; semi-aquatic or marshy herbs . By Celyx 3 to 4-lobed or 4 to 5-partite to the first the first to the fir Minute, tuffed herbs; corolla small ones years, Herbs ; corolla lobes flat, spreading, the two 

### Verbascum Linn

V. thapsus Lann. Sp. Pl. 177, 1753 . FBI 4:250 : FBGP, 2 155 Pennelt Scroph West, Himal, 40

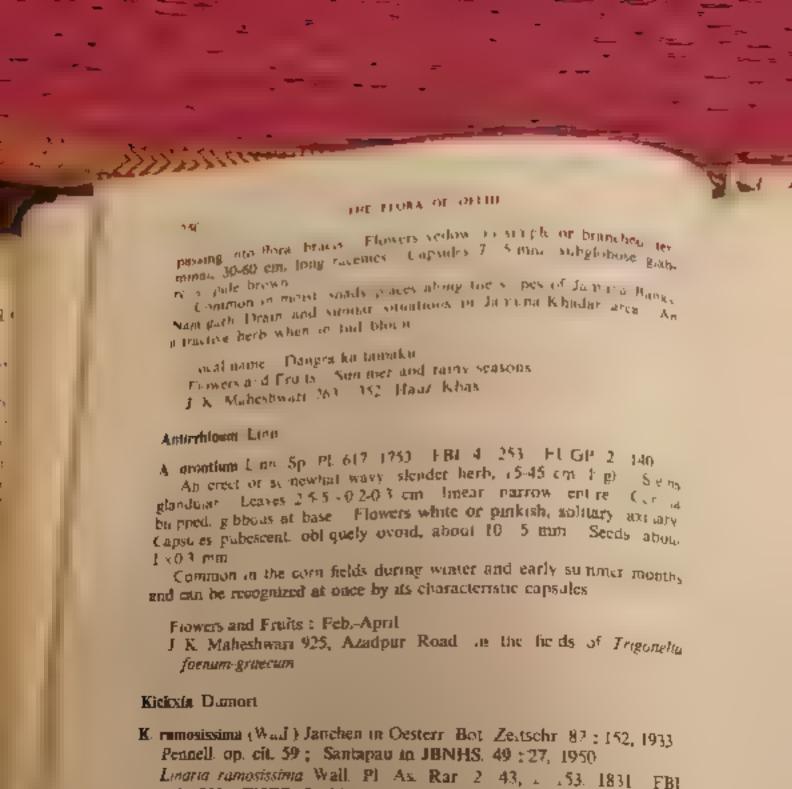
An erect, woo y-toment se herb, resembling a tobacco when veritative. Stems winged with the prolonged leaf bases. Radical easiering. Flowers yet ow much crowded, in terminal, woolly long spike appearing cylindrical. Capsules avoid tomentose about 8 6 110 Seeds about 0.5 x 0.25 mm.

Occurs along canal banks in cultivated fields and along the borders of fields collected from Todapar, near I A R I

Flowers and Fruits: Jan.-April J. K. Maheshwari 1412, Todapur

V. chinense (Linn.) Santapau Fl. Purandhar 90, 1957
Scrophaluria chinensis Linn. Mant. 250, 1771
Celvia coromandehana Vahl. Symb. Bot. 3, 79, 1794; FBI 4, 251
An erect pubescent annual, branched or unbranched from the base.
Radical leaves rosette-forming. lyrato-pinnatind, cauline ones smaller.





Lingua ramosissima Wall, Pl. As. Rar. 2, 43, 1, 153, 1831. FBI 4:251: FUGP 2:140

A slender, glabrous, much-branched herb, up to 60 cm in length Lower leaves opposite, upper alternate, variable in shape, round-ovat e to trangular-hastate. Flowers yellow, solitary, axillary, passing into long, terminal racemes, spurred. Capsules globose, pale brown echini-late.

The plant is interesting for its special habitat. Occurs commonly in the crevices and fissures of ancient fort walls, from where it hangs downwards. On 23-7-1955, I collected a number of plants , most of them bearing mature fruits) from the fort of Nizamuddin and Hamayun's tomb Another member, Lindenbergia indica Kuntze, is also found in sim air locaities.

Flowers : April-Jurie. Proits . June-Aug. J. K. Maheshwart 1123



Russelin Jacq

Leaves broad wase served

Leaves Lucar lancoclate or ownte upper ones reduced to scale

R. cocenies, We a referred & Francis New Person 4 to 62 (89 & A gordon abrub. Lecture 52, 1894

t garden shrub. Leaves opposite or whenter what is the temperature of an interpolation of the state of the st

Grown in the hedges of gardens for its flowers.

Flowers : Nov July

J. K. Maheshwari 219, Talkatora Gardens

R. equisetiformia Schlocht. & Cham. in Linnaea 6, 377, 1831. Santapau in JBNHS. 49 : 47, 1950.

R junces Zuce, in Flora 15(2) Beibl 99 1832. Halnes Bot Bi & Or 620., Bor & Raiz 227 Pt 82 83

An erect or drooping, beautiful, rush-like much beautiful strub, resembling an *Equiscium* when vegetative 1 m or more residences. Stems ribbed Leaves whorled, linear Lioceolate or ocate upper ones reduced to scates. Flowers numerous, red or bright star et of to 3-flowered peduncles, borne in great profusion on the drooping branches.

A garden shrub, grown in the shrubbenes and hedges of gardens for its exceedingly beautiful appearance.

Flowers: June-Nov J K Maheshwari 771

### Striga Lour

S. euphrasioides (Vah.) Benth in Comp. Bot. Mag. 1, 364-1835, 1 Bt. 4, 239, FLGP 2, 157, Pennell op cit. 97, Santapau, 1, RBSl. 16 (1): 208, 1953

Buchnera euphrusioides Vahl, Symb Bot 3:81, 1794, Wt Ic t. 855.

An creet, strigose herb with simple or branching stems. Leaves linear, scabrous. Flowers white, solitary axiliary, forming interrupted terminal spikes. Calyx 15-r.bbcd, scabrous, lobes linear-subulate. Corrolla tube exserted. Capsules shorter than calyx.

Grows in grassy places and on drying up areas near canals, pends and puddles; often mixed with grasses.

Flowers and Fruits: Cold season P. P. Schgal 1111, Shahdara



FEET GOVERNMENT fundembergie vehi I Indient to King e Rev Gen 462 N.L. 40 44 64 a de view in the alich to a link de start in the fig. OF CAP MA FRE & SET to'e se rate I howers serious sported with red, an 1 cy to entire at any and terminal, spicate rucemes. Cupations are a um is phily exserted from the cultur, haves common he crevices and arm next states aborder to then and where things downwards. Greens on Jry placely we Thowers and Frints: Jan.-April J. K. Maheshwari 740. Lodi Gardens ; 829. near Qutab. Mazes Lour M. Japonicus Thunb I Kuntze Rev. Gen. 462 1891 Pennel. Scroph. East Temp N Amer 137, Morr Enum 3 432, Santapau n JBNHS, 49 . 48, 1950. Lindernia japonica Thunb. Fl. Jap. 253, 1784 Maries ringories Lour FL Cochanch, 385, 1790 A small, glairous or harry, tufted herb, Leaves mostly radica 1.8 , 25 cm., obovate-spathulate or oblong, aregularly crenate. Flowers purplish-violet with white, in terminal, las racemes Capsules subginbose. Seeds very minute, pate brown. Common a wet or damp places along banks of Jamana River, in lawes and amilier situations. Flowers and Fruits - Jan.-March J. K. Maheshwari 590 : 1277. Linderata Ad-Stamens 4 with perfect anthers Upper two stamens perfect, the lower two reduced to stammodes L crustaeca Leaves parattel-nerved; stammodes bilobed, capsules avate Leaves peant-nerved, stammodes entire capsules linear-oblong L. crustaces (Linn., F. Muell, Cens. Austr. Pt. 97, 1882; Mukerjeo in JIBS 24 . 130, 1945 . Merr. Enum, 3 ; 437 ; Santapau in RBS1 16(1) Caprorta crustacea Linn Mant, 87, 1767,

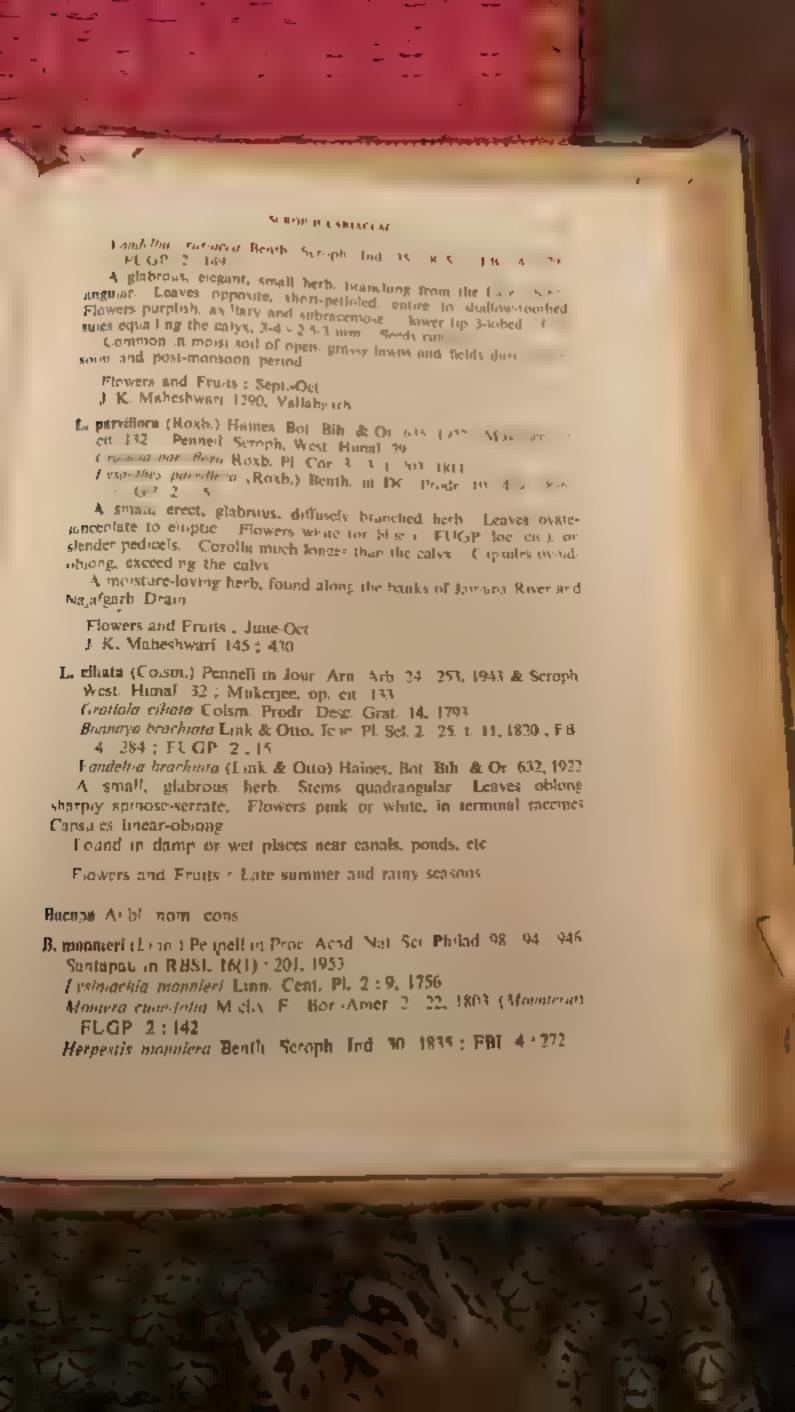
ł

at right

n 1g

۱.

tan.



A prostrate herb with spreading or ascending branches rooting at nodes. Leaves oborate-obiolog or spatholate, obtuse succelent up to 18 v0.6 cm. Flowers butch-purphet or white with buish veins, erect sobtery, abort- or long-pedicellate Capsules evold, glabrous, 4.5 3.4

A sem aquat or marchs hern. Common a marshy or wel places nest cana's, ponds and lakes. On wel muddy so a near Hindan R ver a torms a dense that of plants, dominating the segetation. Said to be a nerve tonic and experiments are being conducted in Eady Irwin to lepe New De his to stody the effect of this herb on animal nerves to 5 in hitter herb and also used in cure of gonorrheal troubles

Local name. Neem jai. Jal lep. Flowers Aug Oct Fruits Nov Dec J. K. Maheshwari 316, on way to Okhla | 562 Azadpur Road , 1257 Hindan River

### Glossostigma Arn. nom. cons-

G. spathulatum Hock es We) Arn ex Benth in Comp Bot Mag Z 59, 1836 FBI 4 288 , FUGP 2 152 Pennell Scroph West Himal, 36., Santapau in JBNHS, 49-41-1950 Microcarpaea spathulara Hook ex Wt in Bot Misc 2 .0! Suppl

A minute suffed, weak herb, rooting at the nodes. Leaves 2.5-6 2 mm., narrowly spathulate. Flowers bluish, solutary, very minute. Calyx campanulate, enclosing the capsule

It is the smallest member of the family in the area , concreted once on Oct 4, 1953 in moist or wet, sandy-clayey or muddy soils near Najafgarh Drain, often escapes notice due to as very small size.

Flowers and Fronts : Sept.-Oct

### Veronica Linn.

A prostrate herb, teaves cordate-ovate or orbicular, flowers solitary, An erect herb , leaves oblong or linear-oblong , flowers in racemes

V. agressia L.mn Sp Pt 13, 1751, FBf 4 294, FUGP 2 154 V onogollis-aquatica

A pubescent, prostrate or decumbent annual. Leaves ovate-cordate, 15-24 1-2 cm, coarsely crenate-serrate. Flowers white, with pinkish tinge, solitary, axidiary, pedicets bent in fruit. Capsules about 3 - 5

A common winter season weed in lawns, cultivated ground, moist, waste situations and recently disturbed soils, often hidden amongst

grasses and associated with Anagodis areconstance to proceed at each Coronopus didymus Sen. S mbrapa and I am Ma a parchase tra

Flowers and Fruits Dec Much J. K. Mahoshwar et S. C. seers to C. sucho.

y magable-aquation Lon Sp. Dr. 2 (201) Elf) 4 77 F GF

An erect a content plabranes herb to se any tat. Street in a percent it and so there is below leave s s 15.5 m 5. In college to mean a see a figure pale is tolle or white in a cine a ringings (apriles about 1 25 mm orbital at 1 emarg, no e the profession

Campain in moist or wer saturdones in the Jamusa-Rhadar in ea nong the banks of Jamona River and temporary ponds

Flowers and Fruits : Feb.-June J. K. Maheshwari 610, Timarpur

# 74. Orokauchaceae

Orobanche Linn.

a

4

O. segyptiaca Pers. Syn. 2 . 181, 1896; FUGP 2 164.

O indica Buch -Ham ex Royb Ft. Ind 3 27 1832 FBI 4 326 An erect, pale brown, scapagerous root parasite. Scales lanceola e Flowers blue many sessile, in a somewhat lax spike. Bracis ova e acummate. Capsules oblong.

Common in the fields, parasitic on the roots of various e drivated plants. Also found as a parasite on the roots of Amni major I on (Umbed ferae), which is grown as a winter ornamental in the University

Local name: Khumbi

Flowers and Fruits: Jan.-April

J. K. Maheshwari 805., 1376, on Anina majus in University Gardens

### 75, Lentibolarisceae

### Utricularia Linn

Pedancies with a whorl of floats U stellaris Pedancies without floats U flexuosa

U. stellaris Linn f Suppl. 86, (781 , FBI 4 328 FUGP 2 : 165.

A rootiess, riquatic nerh, submerged except the inflorescence. Le ves pinnately divided into capitalary segments, each with small biadders, a

their hases, often in whoels of 4-5 at the nodes. Finwers yellow or cream. nationing in acrist receives. Peduncies kept erect by a whorl of apolity the tare correct fee feeling equatic common in he chall w temporary punds, pushoes and disches of village Gheora

Flowers and Fruits : April-June

U. stelleris Loop. F var inflexa Cf in FBI 4 - 129, 1884. Differs from the type in postersing flowers white with violet streaks Occurs in the Najafgarh Dram, often aviocioted with other aquatics

Flowers and Fruits Sept Oct

U. ffexuosa Vahl, Foum. 1 198 1804 FB3 4 129 FUGP 2 166 A rootless, free-floating aquatic submerged except the flowers Leaves whorled segments h. form, possessing hiadders. Howers ye low bracteure, in erect acrus, riceines peduncles without floats. Capsules

Common after the rains in the Najafgarh Drain, associated with other

адивыев

Flowers Sept.-Nov Fruits Dec.-Jan. J K Maheshwari 479

### 76. Bignosiscese

Erect trees or shrubs Leaves sample

Leaves compound .

Leaves digitately 3 to 5-foliolate:

Petioles narrowly wanged. Howers softary or clustered on tubercles on the old wood . . . . . . Petioles simple, flowers in terminal clusters on leafless shoots

Tabehina

Teromeila

Leaves pinnaicly compound :

Leaves unipermate :

Fruits indehiscent, large, woody, gourd-like . Fru is dehescent, not as above

Large shrubs ; leaffets toothed; capsules linear

Trees, leaflets entire capsules large, cylindric, curved Haplophragma

Leaves 2 to 3-pinnate :

Leaflets ovate to ovate-isnocolate, larger, stamunodes absent, flowers white with long, slender tube

Millingianta

Climbers 64.44 T'c

> 70 Carm. ٩

Lecome T pendu FL Bue Ico

> natroy DICHO O of gar

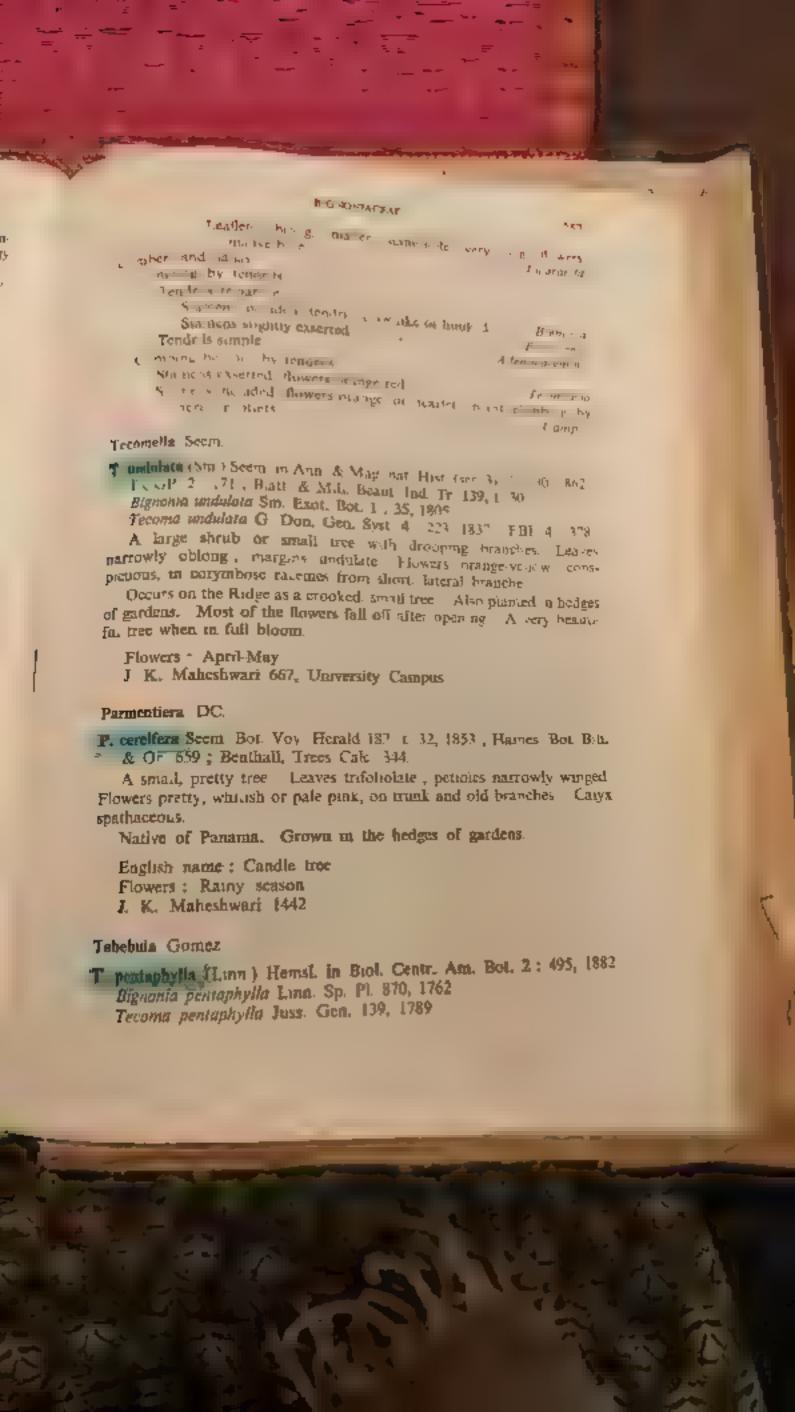
ful tr F

ā,

Parm

P. c

Fio spa



A medium-sized tree, branching from new he ground ale vest digitately compound, 3 to 5 foliofat from the coast doug, entire 9.18 < 6.9 cm. Flowers shows toss pink, funnel-shaped, in term naticulture when the shoots become leafless.

Planted in lawns and so at a very handrome tree when flowers appear on the leafless about The flowers usually full off without pro-

due on the to

Flowers: Dec March

J. K. Maheshwari 172, University Campus

Kigelin DC

Princets DC Prode 9 247 1845 Parker For F 350 Bentool Trees Case 346

A medium-sized, spreading tree. Leaves terrate, impariging a Leaffus 7.9 objuing or obeyone 7.5 fx 44-7.5 cm corractions, dark green. Howers claret coloured in fax, hanging racenies. Fr in \$30-45 x 2 cm, woody gourd-one hanging on cord-like, severa cm angustarks.

Native of Trop Africa his thrives favourably in Delhi producing large number of flowers and fruits. Commonly planted along the main streets as a roadside tree. Also planted in gardens and lawns. It provides excellent shade by its dense crown

Flowers: May-July J. K. Mahoshwari 869, University Campus

Tecoma Just, emend. H. B. & K.

RHSI 16(1) 217 1953 Bor & Raiz 37 f 28, Pl 9, 10

Bignonia stans Linu, Sp. Pl. 871, 1763

Stenolobitan stans Scem. in Jour. Bot. 1: 88, 1863

A shrub or small tree. Leaves 3 to 5-pinnate. Leaflets 4-0 - 3-4 cm, ovate or lanceolate acuminate, sharply semate. Flowers bright yellow. Capsules 12-20 0.7 cm. Seeds thin-winged.

Commonly planted in the hedges of gardens for its graceful foliage and beautiful biossoms. Also found as an escape in waste, dry places near gardens and houses and on recently disturbed places. Var. aprifolia DC with leaflets having necesions of a pinnatipartite to pinnatisect type, sometimes unequally biful plate or with bipinnate leaves is also grown in garden hedges.

Flowers: July-Jan. Froms: Feb -July J. K. Maheshwari 52



### Haplophragma P Do.

At adraophellum (At 1 ) P Lie p of Base Soc. But, France 72 800), 925

13 B See Hot. France 72 889 1970

16.5 serios de apriellare Secin. ex Benth. & Hook & Gen P

A to disco with a dense change (earth a pe in apparate of the first blance of the period of the peri

P ni d as a avenue tree in New Delin. Also grown in the edges of govern. There is a fine avenue of these trees across the extrance gate to the indian Ago, a sura Research Institute. Self-sown steelings are often met in the shade of these trees.

Fowers Sep -Nov Prats Oct Feb. J. K. Maneshwart 574. Queensway

### Millingtoma L.nn. f

M hortensis Linn. f Suppl. 291, 1781; Parker For. Fl 378; Steenis. op 6 \* 8 \* 6 B att & M.H. Bea \* 6. \* \* 6 Tr 106. t 22.

A tail creet, handsome tree with narrowly pyramidal crown, branching high above the ground. Bark greyish-black corky beaves 2 to 3-pinnate. Leaflets ovate or evate-lanceolaic, acummate sinuate or crenate 2 % 5 x 2-3 cm., deep green above. Flowers white, fragrant, numerous, pendulous, in terminal pameles. Corolla with rong slender tube.

Planted in gardens and avenues for the beautiful foliage and silvery sheen of flawers. However, it is not smitable as a roadside tree owing to its tall and straight habit with vertical branches which provide utile shade. Some trees have been planted on the Queen Mary Avenue along with tamarinds and Terminalia arjuita Wt. & Arb. The fruits are not produced in the area.

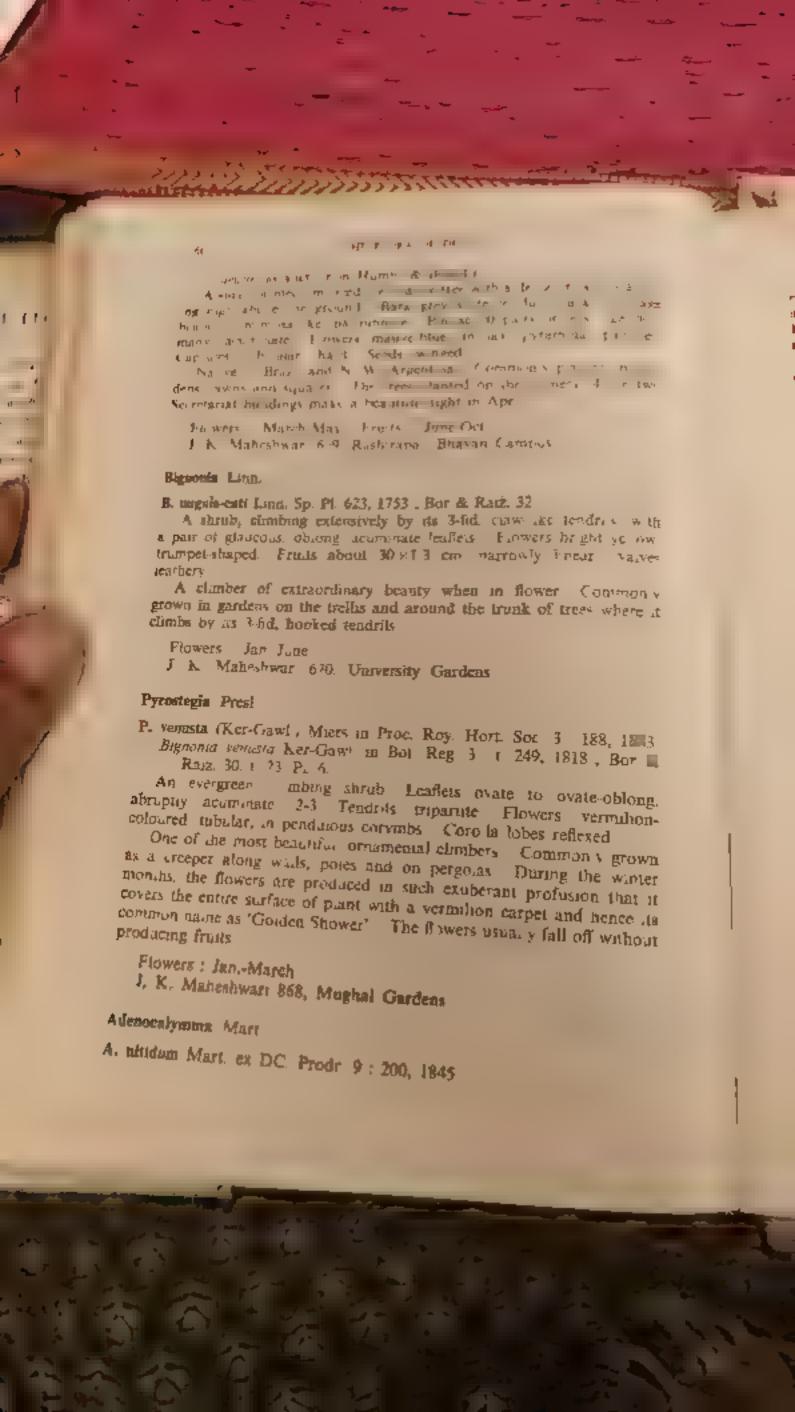
Local name: Neem-chamen Flowers: Nov-Dec J. K. Maheshwari 525

### Jacaranda Jusa.

J mimosifelia D Don in Bot Reg t 631, 1822 & Edinb N Phil Jour 260, 18.3, Sandwith in Kew Ball 456, 1953, Blatt & Mid op Cit 93, t. 18

J ovalifolia R Br in Bot Mag t 2327, 1822, Merr Enum. 3: 444





An extensively aprealing combing dynch. Stems of contract to data accurate, ficures digitately the point to 3 to 3 to 3 to senter, contract the Flowers golden yellow, secured target at the first tenders among tenders her who senter the received formula trumpot shaped.

Community grown in gardens for its targe shows flowers it was quickly on trulfs and along with forming a long sector. The a is are extracted by complements, extra theral glands in the case. The plant is often wrongly known as dignosia chamberlooms 5 and

Floors Surtiner and may sequing

### Feedmarks Space

T cuperson Thuch Space Hist Veg Phan 9 117 1840 Bar cy Man

Regnoma specials Phone Prode Pl Cap 105, 1800 Le oma capenais Leidl Bot Reg 1 1117 1828

A misting should Leaflets 5.9 broad orate to ovate somate flowers orange-red funnel-shaped in pedancied terminal ratemes Corolla olimped. Stamens exerted.

Grown along the outer walls of guidens for its ornamental flowers

Flowers and Fruits . Summer and rainy seasons I K. Maheshwari, in pardens

### Campsis Lour nom. cons. prop

Leaflets 9-11, pubescent beneath, calyx teeth short . C. radicurs Leaflets 7-9, glabrous beneath, calyx 5-lobed to the moddle

C grandiflora

C. radicans (Lain , Seem. in Jour Box 5 372, 1867 , Beiley op cit. 903 Bignonia radicans Lain. Sp. Pt. 624, 1753. Tecoma radicans Juss. Gen. 139, 1789

A spreading shrub. Roots arising from the branches. Tendrils absent. Leaflets 9-11, oval to ovate-oblong, 4-6.5 × 2.5-4 cm. acummate, serrate. Flowers orange-scarlet, in terminal, drooping corymbs. Capsules cylindric-oblong, 7.5-13 × 2.2 cm., beaked. Scods winged

Commonly grown in gardens for its large showy flowers, beautiful foliage and climbing habit.

Local name : Latkania

Flowers: April-June J. K. Maheshwart 669

C. grundiflora K. Schum in Engl. & Prantl, Nat. Pfam 4(3b) 230, 1894; Bailey, loc. cit



a tontos.

Bigramia grante in the rebinds to Jup. 753, 1764. Termina grante had to sell also by A. E. C. 5, 1, 286, 18 a, 27.

A handsome, climbing shruh it eaflers ?? At 12 over a new late, serrate. Flowers large orange or based in directly a series. Orown as an ornamental among the real, send at go a 15 in about points and pergolas for its graceria settings and user in convolution in the

Howers Summer season

J. K. Maheshwarf, cultivated in gardens.

### 77. Fednincene

Flowers vell w frosts drapaccous, 4-spinous . . . . Pedahani Flowers pink or rosy ; fruits elongate capsular Sestman

#### Pedaljum 1 no.

P murex Line Syst 1.23, 1759 Barnes, Bet Bri & Or 661

A diffuse much branched spreading or ascending, substitution herb to undershrub. Root colour that of turners. Leaves evate distantly crenate. Two dark violet-coloured gainds present at base of petioles and pedicels. Flowers vellow. Corona lobes unequal Finits 4-sided, abruptly narrowed at base, with 4. sharp, horizontal spines.

Occurs in damp, sandy son near Okhia. Najafgarh and in the andulating tracts near Fandabad. Also found in waste places near habitations and graveyards. Occasional on the Ridge. The fruits are medicinal and sold in the market.

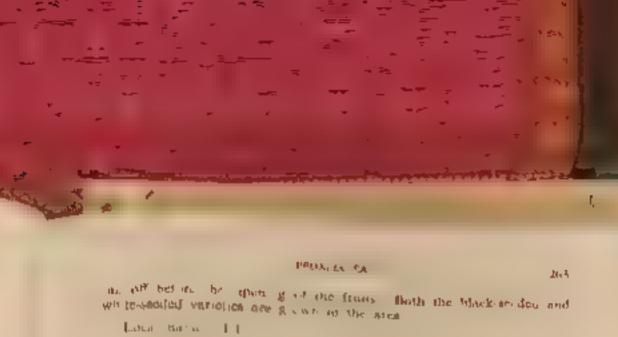
Local name: Vilayir gokhrn Flowers and Frants: Aug.-Oct. J. K. Maheshwari 327

### Sesamon Lion.

S. Indicum Lian Sp Pt 634, 1753 , FBI 4 387 , FUGP 2 175 , Santa-

An erect, harry, robust or tall herb, up to 18 m tail. Lower leaves often compound, lobed or deeply divided, broad ovate, upper ones undivided, I near-obiong. Flowers pink or rosy, bent, solitary, with Seeds black (on the Delhi Ridge) or white.

Common as well as abundant as a naturalized weed on the R dge during the monsoon months, but the seeds produced are rather hard Also cultivated for the useful on yielded from the seeds. The leaves



I ovois and fruits. Aug New r K Maherhwart 261 454, Ridge

### 78. Starty Minocae

#### Martynla I as

М. априя с п. 5р. Ръ. 6.8, 1753

M. diandra Chix et a. Ben 14 Cantak Homes Bed Br. & Or 562 A to b rough awarshrob Rioss deep schow. Lea es large broad ate sucky ungeneticied ellowers coss equipments aland has francing and at cormina guardum-sticky raceme. Braces and brace to les pera o de la ruiss large, hard, black, with two prominent acox.

Nat to of Mexico bin has become a part of the natural flora Common during and after mails on the Ridge in depressed areas and ale ag the roadsides passing through the Redge of Delhi and New Delhi It is a conspicuous plant and can be easily identified by its grandmar sticky nature shows it so flowers and the scange frank. A some contaex ra-floral necessry occurs a the base of the proced

Flowers Adg Sept. Fronts . Oct.-Nov J. K. Maheshwari 295

### 79. Acanthaceae

Habit climbing terect in Thumbergia erecta only) calva minute, annular or 10 to 15-toothed . Thunbergue

Habit erect or prostrate, not climbing

Scapigerous, stemless herbs; leaves radical

Elytraria

Plants with stems and cauting leaves

Spikes aggregated in radical or subradical glubose heads

Lepidagathus

Inflorescence not as above

Corolai without an upper by, lower by large, expanded, 3-lobed . . .

Corolia hilipped or with 5, subequal fobes

Corolla distinctly or somewhat bilipped

Inflorescence spinous

Asteracantha Inflorescence not spinous

Comila tube longer; placia cultivated

Flowers bright red, in spicate racemes; corolla somewhat 2-hyped . . . Thyracconthus

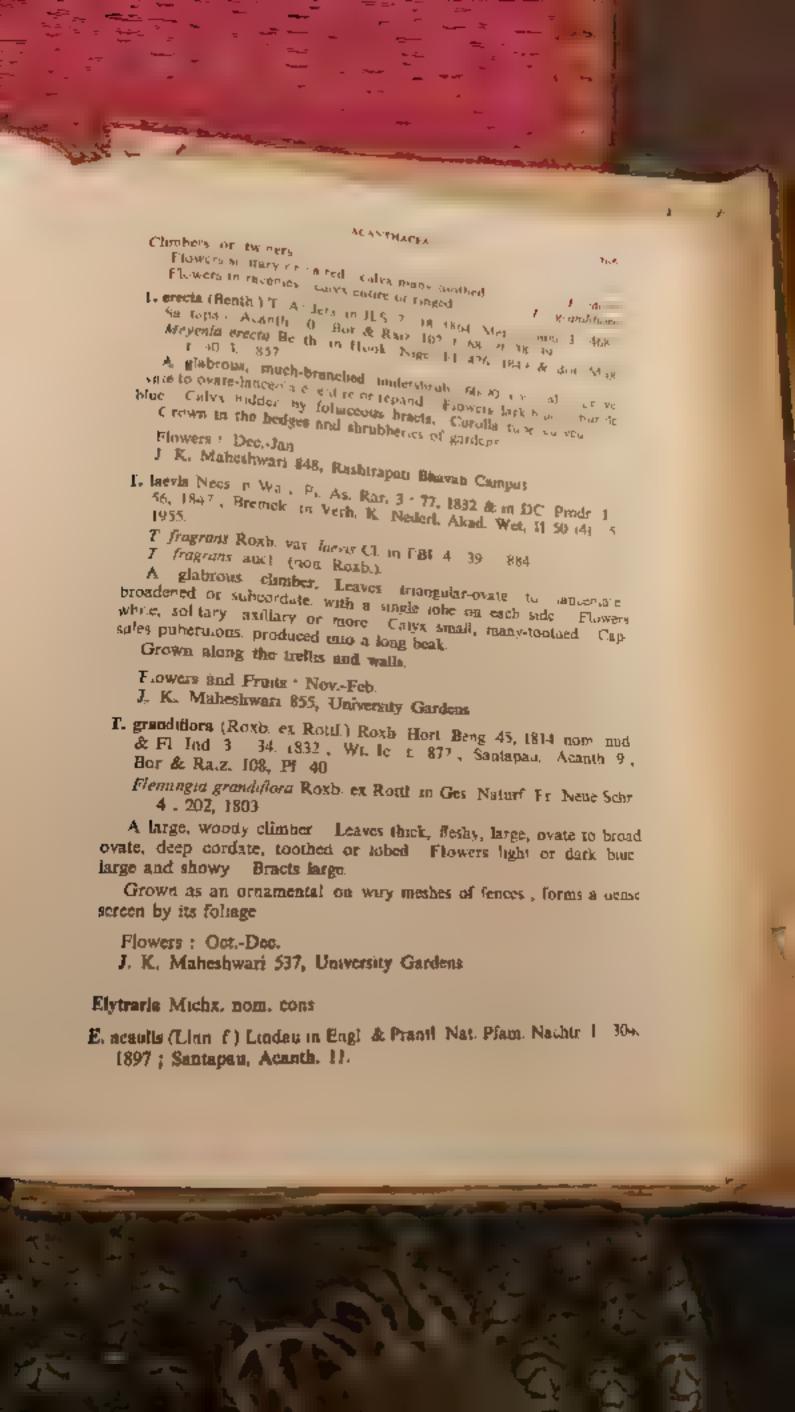


Flowers in terminal and axillary thyrses; corolla Jus hana strongly 2 hpped Corolla tube small or shorter Oveler 3 20 in each cell or more Flowers in lax panicles, often in ar facial nacemes : soods 3-6 in each cell . - . . . . . . Andrographis Flowers in dense, terminal apikes : seeds of or more in each cell. Hygraphda Ovules 2-1 in each cell Flowers pink or rose in trichotomeus y branched cymes forming panicles ... . . . . . . . . Peristrophe Flowers in dense spikes Bracis with scarious margins, 2- or 4. rowed in secund spikes; if 4-rowed dimorphic Bracts in cylindric or 4-ferrous spikes, bomomorphic : Herbs; anther cells, at least the lower with a basal, spur like appendage - - - - - - Justicia Shrubs; anther cells apaculate, not spurred at base . . . Adhatoda Corolla lobes 5, subequal: Ovules more than 2 in each cell, capsules 6 or more seeded : Flowers in capituliform clusters or contracted cymes -Hemigraphis Flowers larger soldary or few together or cymose Roots with elongated tubers, flowers in lax, axillary cymes . . . Roots without tubers, flowers solitary or in anillary triads or 2-3 superposed. Dipteracanthus Ovules 2 in each cell; capsules with 4 or fewer seeds. Bracts causte or ending in a bristle; flowers yellow, blue-purple or white, calyx 4-partite. . . . . . . . . . Barleria Bracts not ciliate, flowers deep blue; calyx 5lobed . . . . Eranthernum

Thunbergia Retz. nora. cons

An erect undershrub

T. erecta



266 ) u P) And the same of the same after the s we and the transmission to a di-New York and to see to an long or to force Sames "Sa sa a mile of the most of the same that the part of the same a specific a big of not been been and a consister on pine to, so its o harman range compare a k feet 1 of a talk that governous a Shades a custom price when you consequence of the distance sie whose stands of strates in high indifficulty contact white Visigi thick dear the man to be backs sonde barne a Pa harchatta th wers and Fruits. Buy Sept. J. K. Maheshwari 203 Lepidaguthia Wilid L. cristata Willd. Sp. Pl. 3 400 1800 . Wt. 111 4, 164, f. 5 & Te 1 455 , Santapau, Acuath, 71 A perennial herb with procumbent branches Leaves linear or of one up to 4.7×1 cm. Spikes aggregated at the base a globose radical or subradical heads. Flowers white, spotted with brown and purple Bracts and calyx lobes spinous-mucronate. Capsules 2-seeded. Rare in Old Delhi Ridge but common on the Ridge of New Delhi in the shade of trees Flowers and Prents . Oct. April I K Maheshwari 763 Blepharts Jusa Leaves 4 in a whorl Leaves petiolate, thin, acute B. maderaspatensis Leaves subsessile, thick and fleshy, obtuse B. molluginyfolia Leaves in opposite pairs B. asperrima B. maderaspatenski Linn Heyncex Roth, Nov Pl Sp. 320, 1821; Bremek. to Verb K. Nederl. Akad. Wet. II 45(2) 10, 1948; Santapau. Acanth. Acanthus moderaspatensis Linn, Sp. Pl. 639, 1753. Blepharts boerhaviaefolia Pere, Syn. 2: 180, 1807; Wi Ic. t. 458, FBI, 4: 478; FUGP. 2: 183 A prostrate, spreading or erect pubescent, much branched herb. Leaves thin, in whi rls of 3.4, inequal 3-6.5 - 1.2.2 cm., evate, elliptic or abovate entire or manuely denniculate. Flowers blue or pinnishpurple, soulary or 2-3 together Bractcoles brustly Capsules 2-seeded.

the state of the s A S THE P . The Manchant of Box and Comment d molloguitistin (t. ) A mollingmit star (s. 182 Am. 1 lot 4 3 2 ( rich ) but con our as it may been part. had go a september a Fr Cr - Fr to the Set the K. K. Mark has a real following the set that B. aspertinia Nees with Program and the San Fla S. K. Mokenson and ANALY sign ask pass to a sign of the analysis of Dec. The appearance of the analysis of the A small across Leaves in one case pages in case cride, where given no broader than B mallaginglosia very blowers or go brae Liowers Dec Jan Asternozutho Nees A. longifoliz (Linu.) News in Wall. Pl. As. Rar 3 90, 832, DC Prodr II . 247; PUGP 2 184, Santapau, Alanth .7 Barleria longifolia Linn. Cent Pi 2 22 1756 & Amoun Acad 4 Ruellia longifolia Roxb, Fl. Ind. 3 50. ESSE Hygrophila spinosa T Anders, in The Louis. 225, 1860 & in JLS An erect, markey, hop a steat north. I caves sessue, whorled, ianecolate, the 2 outer ones onger each with a sharp, straight yearow spine Flowers bright biae to blush-purple, showy, in sessile axillary whorls Capaules unear-obtong Occurs along banks of fresh or stagnant water ditches and swumpy grounds, mixed with marshy grasses and sedges. The spines persis after leaf fair

Flowers and Fruits . Oct.-Dec J. K. Maheshwari 540, canal near Sarai Robilla

Thyrsacanthus Nees

T. strictus Neev in DC Prode 11 324 1847 Parker For F1 363



DER DESSA HE DILLE 765 Leaves olliptic, broadly unlong-ovate h my ancerate acumumic entire or undulate, leathery Flowers by phoceamies, in the toring the spicate recomes, in the axis of braces t in a tube clightly curved and somewhat broadened above t rown as an ornamental shrub in the hedges of gordons Flowers : March-Max J. K. Maheshwari 655, Rajghat Campus Jecobina Moric nom cons J rinctoria Hemsl in Biog Centr. Ant. Bot. 2, 1822. Parker, F. e. 2 - E 1877 6 FI, 393 An erect diffuse shrub Nodes conspicuously swollen. Leaves wate or curptic ranceolate acuminate pale green. Flowers verm, I on or deep orange, in terminal and amiliary thyrises Grown for the beautiful, ornamental flowers Flowers: Ramy season 1 K. Maheshwari 353, University Gardens Andrographis Wall. Leaves gibbrous flowers in lax, panicled racemes, capsules glabrous A. paniculata Leaves harry , flowers to axillary racemes, capsules harry A. echioides 4. panlealata (Burm. f.) Wall ex Nees in Wall. Pl As Rar 3 - 16, 1832, Wt le t 518, FBI 4 501, FUGP 2 - 196, Santapau, Acanth 50 Justicia paniculata Borm. f. Fl. Ind. 9, 1768. An erect, gabrous annual, 30-100 cm. tall Branches sharply 4angled or winged. Leaves 5-10 x 1 5-2 cm., ovate-lanceolate. Inflorescence a lax, axiliary and terminal, unilateral raceme, forming a panicie Flowers whitish, spotted with rose-purple Bracts opposite, paired Capsules tapering at ends. Spontaneous in moist, shady places. Also cultivated in gardens Flowers and Fruits : Oct.-Dec. J. K. Maheshwari 1114, New Delhi Ridge A. echioides (Linn ) Nees in Wall. Pf. As. Rar. 3 117, 1832, FBI, 4 505; FUGP 2 197, Santapau, Acanth 51 Justicia echioides Linn Sp. Pt. 16, 1753, Roxb. Fi. Ind. 1., 118 An erect herb, clothed with long, spreading hairs, 25-35 cm tall Leaves 4-8 ×1 5-2.5 cm, decussate, ovate-oblong, linear-oblong or subelliptic. Flowers white spotted with purple, erect, unilateral, candelabrumlike, on horizonta, spreading axiliary racemes. Calyx linear-lanceolate, chiate Capsules elliptic-lanceolate, hasry

Seen on Ridge but not common. Grows in females among the same set of the seen of the seen

### Mygrophila R. Br

H polysperma (Roxb.) T Anders in JLS 9 - 45 186 b 4 for Junior polysperma Roxb. Hort. Beng. 3 1814 oc. n.id & 81 Ind. h. totall. polysperma.

A small, procumbent borb, branching and sharing near the hair terminal, oblong to ovate. However minors a six hair need a de so the tip. Seeds 20 or more, minute, brown. Comment in decrease, minute, brown.

Common in drying up places near the temporary ponds of a same

Flowers and Fruits - March-May J. K. Maheshwan 1421

### Peristruphe Nees

P. bicalyculata (Retz.) Nees in Wall, Pl. As. Rar. 3 113 81 FBI 4 554 F. GP 2 210 Saniapsia Acanth 93. Dianthera bicalyculata Retz. in Vet Akad. Handi. 397, t. 9, 12 5. Justicia bicalyculata Vahl. Symb. Bot. 2 13, 1791.

An erect, mach-branched herb or undershrub, 60 cm. or more or talbess. Stems 6-angled, Leaves 5-10 3-45 cm, ovate, gastrous above. Flowers pink, in trichotomously branched, lax pancies. Corolla bilipped. Stamens 2. Capsules pointed narrowed into a stak.

Common throughous in the shades of trees and hodges often hee ming gregarious. Also common as an undergrowth in the fruit orchards

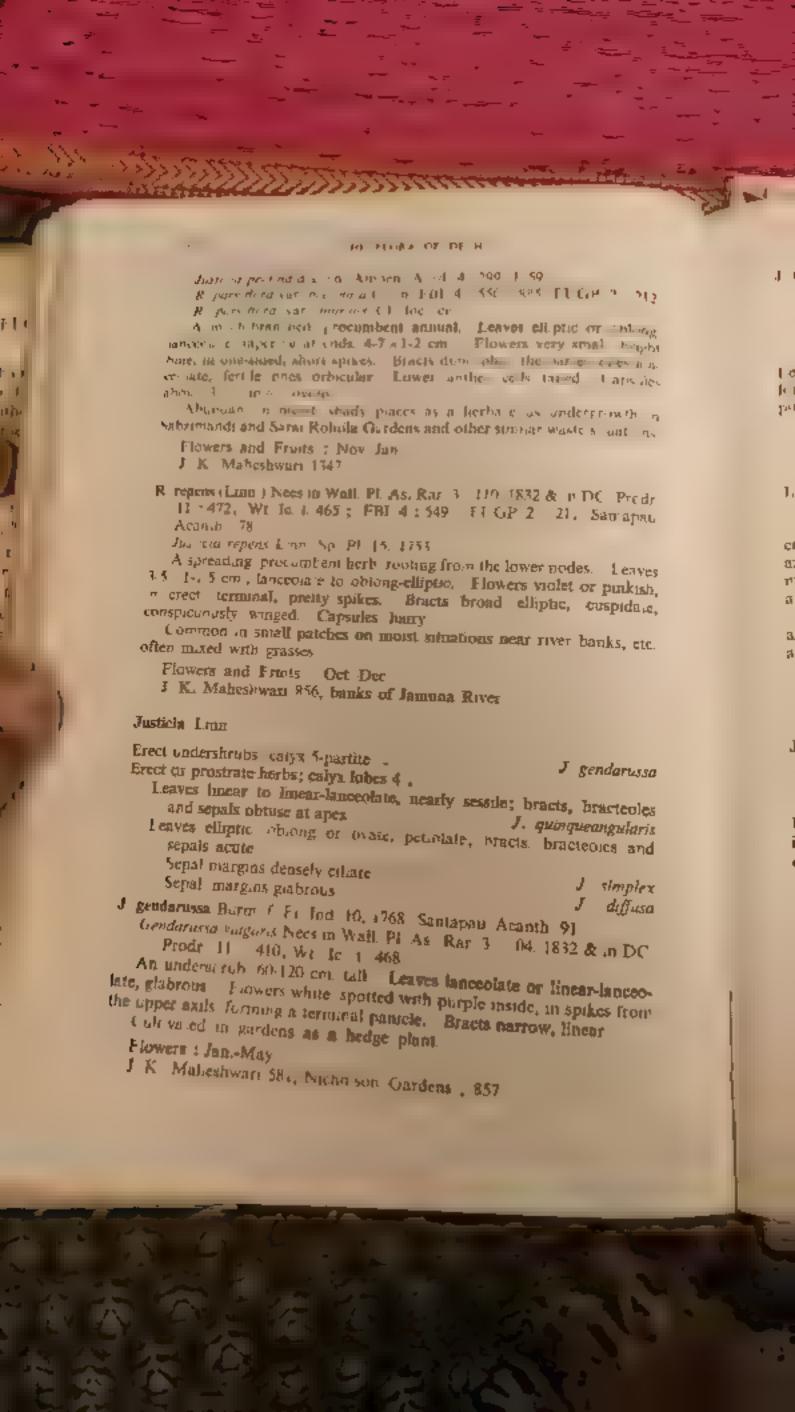
Local name: Missi Flowers and Fruits: Sept-Dec J. K. Maheshwari 426, University Campus

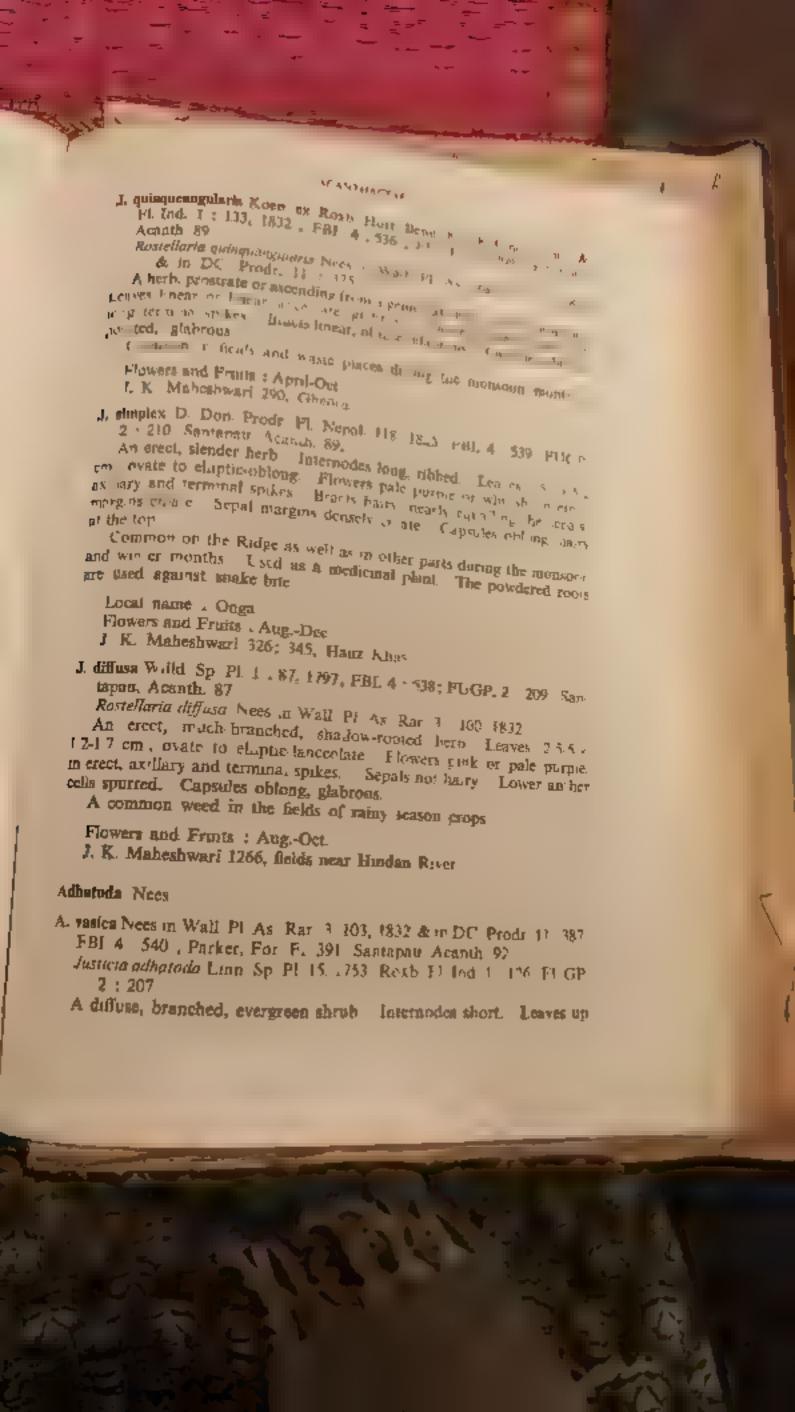
### Rungia Necs

Bracis dimorphic flowers small, bright blue, bracis not conspicuously winged R per tingta Bracis homomorphic, flowers large violet, bracis conspicuously winged R repent

R. pectinata (L nn.) Nees n DC Prodr 11 470 1847, Wt. lc 1 1547 Santapau, Acanth 77







a 30 K cm come or eits a lance rate accommate. If there's abuse a hip accompanies in lease as less parts to the process to process t

the state of the fewer are the stated by the period of the fewer of the fewer are fined as a fewer of the fewer of the fewer are fewer the fewer of the fewer of

Local name : Bansa ; Arusa ; Piabansa ; Bekad ; Busut Flowers and Fruits : Dec -April J K Maheshwari 860, Ridge

### Hemigraphis Nees

1:655

H, bota T Anders in JLS, 9: 462, 1867; Fill 4 422, FUCP 2 19

Row ha hirta Vah. Symb hot 3 84, t. 67 1794. Roxo F and 3 46

A prostrate, densely hairy, much-branched herb with erect markings, I eaves 2.4 17.2 cm osate, croaste. Flowers pare violet to purple-pink, ephemeral 2.2 13 cm., in few-flowered heads. Circ Fa tubu ar ventricose. Capsules meas, glabrous.

Common in the shades of bedges around frust orchards, along the stopes of raised embankments, along canal banks and waste places near ditches often in red with grasses and in these localities, forming a carper of its plants.

Flowers and Fruits : April June J. K. Maheshwari 1022, Karnal Road

### Ruellia Lum, emend. Bremek

R tuberosa Linn Sp. Pt 635, 1753, Bremek, in verh K. Nederl Akad Wet, II 45(1); 11, 1948, Santapau, Acanth. 23.

An erect herb. 30 cm or more high with a number of slender, elongated root tubers. Stems stout, quadrangular Leaves ascending, chining, narrowed at the base entire to subundanate. Flowers I no violet, paired, in the artis of leaves, ephemera. Corona tube abruptly narrowed below. Capsules linear

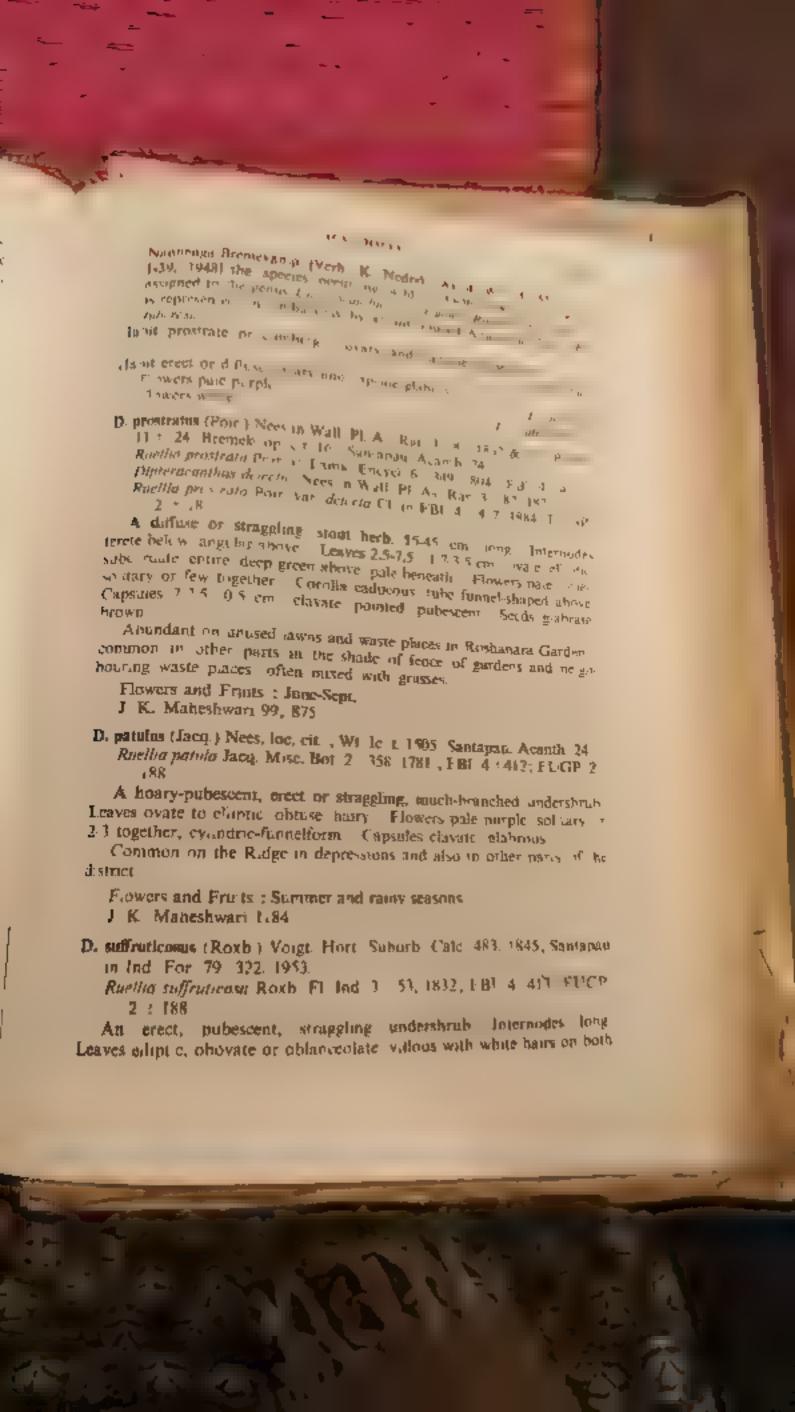
Introduced. Native of Trop America. Grown in gardens. Also spontaneous in heages and waste places near gardens.

Flowers and Fruits: Rainy season J. K. Maheenware 847

# Dipteracanthus Nees-emend. Bremek

After a revision of the genus Ruellia by C E B. Bremekamp and N.E.





surfaces especially on the nerves and veins beneath, margins o hate Howers while, solutive as larry or more. Corolla and style caducous Capsules glabrous.

bound in some parts of the Ridge becoming abundant in some patches

Flowers and Frants Rainy season

#### Barleria Linn

Plan's armed flowers orange-veilow. Plane anarmed flowers base-purple or white

B priontist B cristina

B prioritis L on Sp Pt 636 1753, Wt 1c t. 452 FB1 4 482 FL GP 2 200 Parker For Fr 382 Santapau Acanth 57

A bushy prickly undershrub, branching from base. Stems greywhite Spines 1-4 or more in the axil of loaves, white I caves about 10 5 cm ovate to elliptic, tapering at ends. Howers orange-ve low in erm nal spikes. Calyx sobes spine-tipped. Capsules biack, pointed. larger than calyx

Occurs on the Ridge in shady, protected areas. Also found in waste piaces near gardens. Used as a hedge plant. The plant extract is believe ed to be as b tter as quimme and is used in the cure of whooping cough

and tubercules is

Local name Kara bansa , Piebansa Flowers Oct.-March. Fruits: March-June J K Maheshwari 541, Ridge; 757, Lodi Gardens

8. cristata Lmn Sp. Pl. 636, 1753, FBI 4; 488; FUGP, 2: 201, in part Merr Enum. 3 479; Santapau, Acanth. 59.

An erect or diffuse undershrub. Leaves elliptic-oblong, abruptly tapering towards the base, glaucous beneath. Flowers blue-purple, in axiliary and terminal, crowded, short racemes. Bractcoles shorter than the outer, spinous sepaix. Capsules ellipsoid, 4-seeded

A new record from Delhi State, has become naturalized in shady places of gardens and waste grounds. Also planted in garden hedges

for its ornamental flowers and foliage

Flowers and Fruits : Oct.-Dec.

J K Maheshwari 859, Roshanara Gardens

B. cristate Lann var dichotoma (Royb) Prain, Beng. Pl. 812, 1903; San-

B. dichotoma Roxb. Fi. Ind. 3 19, 1832

Differs from the typical variety by its white flowers.

A new record from the Upper Gangette Plain Occurs as commonly as the typical variety, in a naturalized state in moist, shady places of gardens and waste places

K. c Eranti

E. net

B Juמ, Α

ethipt deep. YOUNG C

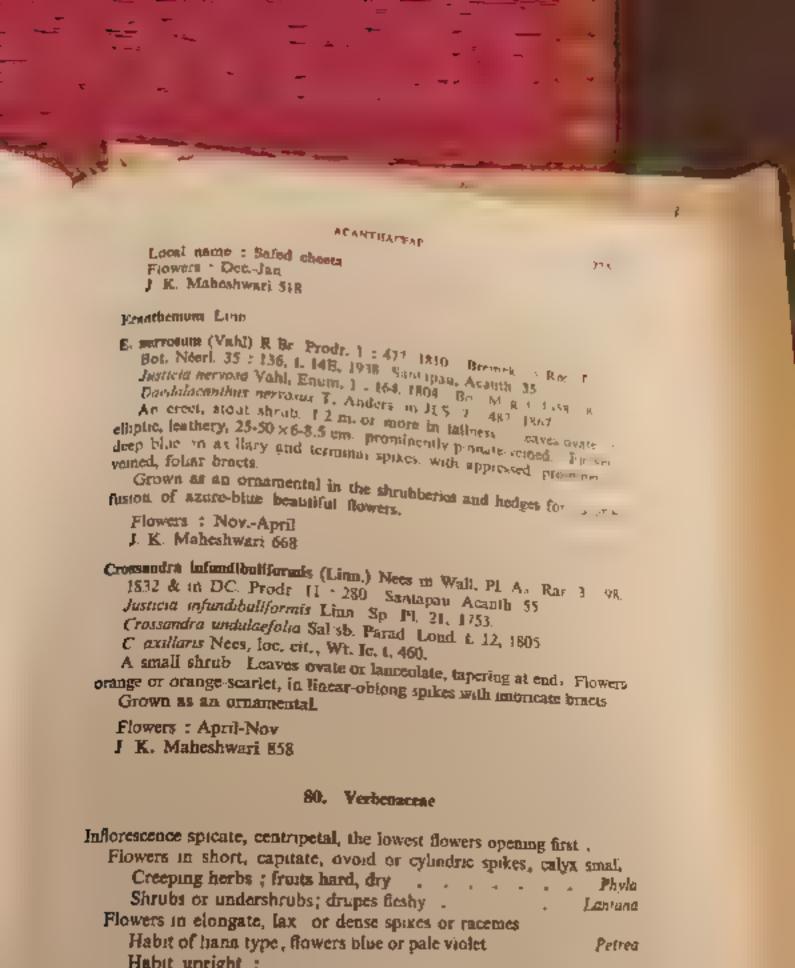
fusio F

Cros

J

orai

Inf



Inflorescence spicate, centripetal, the lowest flowers opening first .
Flowers in short, capitate, avoid or cylindric spikes, calyx smal,
Creeping herbs ; fruits hard, dry
Shrubs or undershrubs; drupes fleshy . Lantana
Flowers in elongate, lax or dense spixes or racemes
Habit of hann type, flowers blue or pale violet Petrea
Habit upright ;
Trees; flowers white, in long, drooping racemes
Herbs, undershrubs or shrubs:
Flowers sessife, pale white, pinkish or lilec.
Erect or decambent herbs, calyx not ribbed, pyrenes 4
·



Much bounched undershrubs callys strongly ribbed Bom hea Flowers pedicellate, in loose, panicled racemes

Duranta

Inflorescence cy nose, centrefugal, the end flower opening last

Fruits och scent, capsule er capsulat,

Flowers where with an orange tube in small bends, a posec in ter i na sichotomons cymes.

Flowers pale violet or light mauve, in dense, axil try forming thyrses.

Fruits indebiscent, subdrupaceous to drupaceous or a drupe with 1.4 pyrenes .

Flowers act nomerphic: stamens equal-

Flowers white catyx accrescent and becoming builders in fruit rices. Tectona Flowers pink, rose or red, calyx not enlarging in fruit, shrubs

(alucarpa

Flowers Pygomorphic, stamens didynamous:

Leaves digitately compound

Pilex.

Leaves sample

Dropes with 1 4-celled pyrene

Flowers small, white, drupes small . Flowers large, yellow, drupes larger

. Premna Gme-ina

Drupes with 4 pyrenes or drupels

Corolla tube slender; drupes exserted, usually succulent · · · · · · · · · · · · · · · Clerodendrum

Corolla tube widened upwards, drupes dry, included in red-coloured calyx Holmskioldia

Phyla Lour

P. nodiflora (Lînn ) Greene in Pittonia 4 : 46, 1899; Santapau în RBSI 16(1) . 217, 1953.

Verbena nodiflora Linn, Sp. Pl. 20, 1753.

Lippia nodiflora A. Rich, a Michs. Fl. Bor - Amer. 2 , 15, 1803., FBI 4: 563; FUGP 2: 217

A creeping, much-branched, perennial herb, rooting at the nodes Leaves 2-3 5 . 1-2 cm., sparhafate to obovate, concate and entire below serrate above. Flowers pale pink, small, sessile, a imerous, a dense, globose, long pedencled, axidary, 13-25-06-1 cm, heads, congrung later into obiong spikes. Pyrenes 2, dry, 1-seeded, plano-convex.

Common in moist places along canal edges, banks of Jamuna River, in moist grassy lawns and other similar situations, often gregarious, forming a carpet of its own at some paces. Very common in the Khadar tract

L. camara funn. var. aculenta (Linn.) Moldenke in Torres (4.) 2.4.
L. camara auct. (non Linn.).

The real L. camara Linn is a spincless shrub the plan and a series of Deihi is L. acadeuta Linn, or the var a mater of M. which is straggling in climbing atomatic shrub, 1.2.2.4 in high and make priceles on the branches. Leaves 2.5.7.5. 2.5.5 km. when or and tancer ate, crenate-serrate, scabrid. Flowers vari-coloured generally orange-consuled or plank, in short, pedanculate, capitate in ke. Branch production or high the production of the plane.

much exceeding cable. Truits drupaced as black shiring. Purenes a common a bedges and tawns of public and private gardens. Though a very comblesome post in other parts of fides it is not so in Deah.

Flowers : June-Sept Fruits : Dec. Feb. J. K. Maheshwari 1207, Nicholson Gardens

L. indica Roxb Hort Beng 46, 1814, nom. nud. & Fl. 1nd 1 89, 1832 FBI 4:562, FUGP 2:216, Parker, For Fl. 396.

A woody shrub Branches 4-angular long and rambing Leaves 3-7 x 2.5.4 cm ternate unequal, ovate crenate-serrate white pubescen beneath. He were pure white scentless, very slightly pale purple in ax hary, pedancied close heads or 1.2.2 cm long spixes clones ing office. Lowest bracts forning involuere. Drupes purple, educated in thin, transparent callyx.

Found on the Ridge in the shades of shrubs and also in the bedges of gardens. The children cat the fruit

Local name ; Mewa ka ped, Tulsidal Flowers and Fruits ; Sept.-Dec J. K. Maheshwari 498, Najafgarh

#### Petrea Linn

P. volubilis L. on, Sp. Pt. 626, 1753, Merr. Enum. 3 381, Bor. & Raid, 141, Pl. 54.

A slender, much-branched shrub or liana. Stems ash-coloured, ienticellate. Leaves variable, ovate to elliptic, 8-15 - 5-6 cm, harsh.



rough. Flowers blue or pale violet, star like, in terminal, long raccines

curve reculoid, rigid Native of Trup America. A handsome plant when in flower Grown in gardens a ring walts pergoias and poles for its biossoms horne in elegant, wrenth-like clusters

Ho

175

ωţ

att

, c

5

Flowers : Oct.-April J. K. Maheshwari 528

### Cithogenylam Linn.

C. sphiotest Lum. Sp. Pt. 625, 1753. Parker For Fl. 405. A small tree Leaves ovate elliptic or lanceplate, glossy taper ng at ends subcorraceous. Flowers white fragrant in long, drooping racemes Planted in the lawns of gandens along the side-lanes of New Deah, and in hedges

English name Friddle wood Flowers : Sept. Nov. J. K. Maheshwari 466, Talkatora Gardens

#### Verbena Linn

Erect or decumbent herbs, leaves panastafidiy lobed, flowers pale pank in Prostrate perennials, leaves dissected into linear segments, flowers .......... purple, in dense heads clongating in fruits V bipinnatifida

V. afficinalis Lum Sp PL 20, 1753; FB I. 4 . 565; FUGP 2: 218

An erect or decumbent, branching herb, 30-100 cm. tail. Young branches with minute, sparse prickles. Leaves 5-10 x 1 5-2 5 cm, variously lobed, scabrous, lower ones pinnatifid or coarsely toothed, upper ones usually deep dentate or tripartite. Flowers pale pink, in dense, bracteate apikes. Pyrenes dry, subcylindric, smooth

Common along canal banks, near temporary puddles and stagnant

water channels.

Flowers and Frants: April Oct. J K Maheshwari 429, Najafgath Canal Banks

V. bipimaetifida Schau, in DC Prode 11 . 553, 1847, Bailey, Man. Cult.

A prostrate, hirsute, perennial herb with ascending stems. Leaves divided into linear divisions, long-petiolate. Flowers blao-purple, in dense heads congating in fruits. Bracts equalling the sepals. Calyx Jobes setaceous.

Cuttivated in garden beds and along slopes of private roads, forming a thick carpet and beautifying the landscape, often met as an escape in waste places near gardens.

THE PAR MAR Flowers and I may Wanter souson K Mahoshwari 241 Bouches Charp nam com H. prarmibilitation Schools | DC Proche | 1 | 558, 1847 | Will | 1 An erect, woody, heary-pubescent robust herb of undershrub, menegrabed from base of the or to in tallness. Leaves ova to a s chang to oblong, 2-3 5 × 1 4.2 cm controls the total settemps depress above clowers dry white of cream-coloured, in erect, terrains iene armosed top to 13 cm. long spikes. Corolla lube na real and spread in anequal Fruits linear obling, black, dry cheen mon. Occurs in soluted patches on the Old Delby R ye these to the Water Reservoir, near Gurukul along ratiway ones are Do h to Faridabad and on the bare hill-tops of Anand Parhai Flowers and Fruits : Aug.-Dec. J K. Maheshwari [216; 1241 Duranta Lann D, repeats Lain. Sp. Pl. 637, 1753; Merr Fauen. 3, 38 Barley Man. C. D. plumiers Jacq. Select, Am. 186, t. 176, 1763. An erect, evergreen shrub with spinese or spinetess branches Leaves obovate, emptie or obsong-lancestate entire or searning with missic surface grands on the lower surface. Flowers violet, in axillary and let minal vacenies, borne in profusion at the ends of branches pedicaded Bernes small, orange, exocarp fleshy, endocarp stony Pyrenes 4 Introduced Native of S America and W Indies Very commonly planted as a hedge plant around gardens, grows very readily from cutt ags Flowers and Fruits: Most part of the year J. K. Maheshwari 17 Nyctanthes Linn. This genus, so far regarded as a member of the Oleaceae has recently been transferred by H. K. Alry Shaw (in Kew Bull 272, 1952, to the family Verbengeege under a new subfamily Nyctonthodege Asty Shaw Stant (in Kew Bull 273-276, 1952) considers several morphological and anatom cal features to differ from those in the Oteuceae but in asport of a Verbenaceous affinity N. arbor-tristis Finn. Sp. Pl. 6, 1753, FBI 3 \* 603 , FUGP 2 24 An erect shrub or small tree Branches 4-angular Leaves 10-15 -5-6 5 cm ovate, acumunate, very scabrous, with unicedular war v tre

chomes and grandolar bar. The were with earling or our resignant in small broads disposed in community materials as a community of the Cops sequence of 2 2 2 cm. compressed orthogonal superating out of that seems

Commonly planted in hedges of gardens and temple a name of the its delightfully fragrant ble scouts. The flence is not to the mail of cross off early next morning. They are collected from the great and made in garands and used for worship. An orange colors of type is not except ed from the corolar tubes.

Local mont. Harveybox Flowers and Frants: Sept.-Nov I. K. Maheshwari 472, Talkatorn Gardens

### Carvopteris Hunge

C wailchiana Schao in DC Prodr 11 625 (847 Brand's For 11 370 PBI 4 597 FUGP 2 228 Parker For II. 404

An creet shrub. Leaves elliptic to fanceolate, acuri na e toothed, canex t at tase. Flowers pale violet hight mauve or white sweet-seemed in dense, as larry cymes forming thirtses at the ends of branches. Capabiles globose pubescent.

A garden shrub planted in the hedges of gardens for its profuse's

produced, sweet-smeding flowers and dense foliage

Flowers: Jan.-April

J. K. Maheshwari 646, University Campus., 1386

Tectome Lines, f. none, cons.

T. grandw Lunn F Sappt. 151 1781 Parker, For Ft. 405, Merr Enum. 3 189; FBF 4 570; FUGP 2 . 220.

A large deciduous tree Leaves large, elliptic or obovate, entire, cunesic at base, tawny-tomentose below. Flowers namerous, rotat-form, only a few fertix, in large, dichoto- or trichotomously branched, the inflated catyx.

Drupes globose, densely indumentose enclosed by

Some trees have been planted in the compound of Rashtrapan Baavan, where they flower and fruit abundantly. There is also one tree in the corner of the Square near Kashmere Gate.

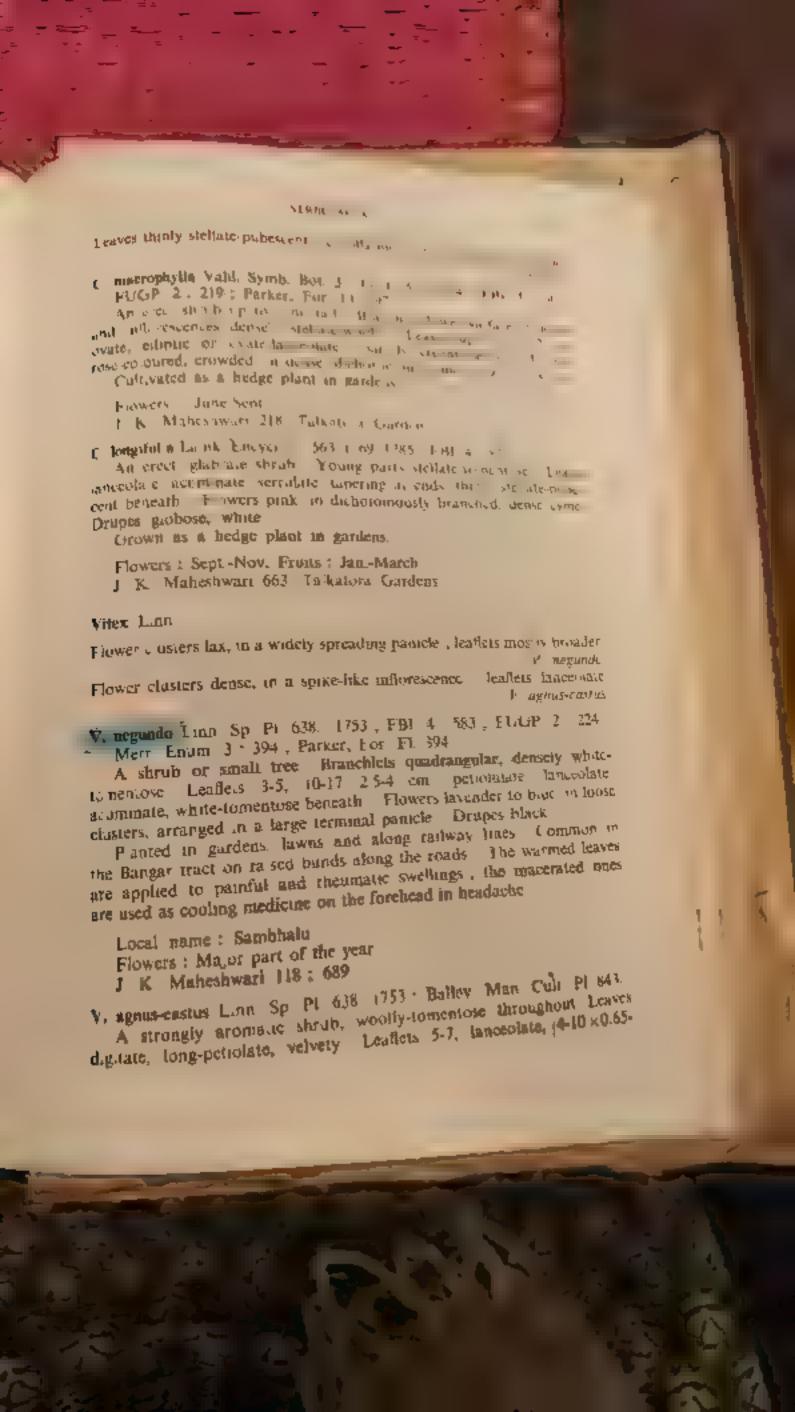
Local name : Sagwan Flowers : Sept.-Oct. Fruits : Dec J K Maneshwari 582 : 1168

### Calliearpa Linn

Leaves densely sterlate-woolly beneath; corolla glabrous outside or with some hairs

- C. macrophylla





13 cm, on re. Flowers pale purple or violet, in interrupted spikes r groups of several. Stamens esserted Drupes small, globose, exceed ag the calvx, 4-celled

Crown in strubberies of parks and gardens

Flowers June-Sept

J. R. Maheshwar. 220. Taikatora Ciardens

Premius 4100

The sourcements Read heart Being 95 1814, norm and & H and 3 80 1832 R vie II. 299 Branus, For 11 366 FUGP 2 222, Parker, For F7 399

P latifolia vas. mucronata Cl. in FBI 4: 578 1885

A large shrub to small or medium sized tree. Frank curved Leaves 7.5-15 × 5-7 cm., subcorraceous, broad ovate, shortly acu timate, entire or undulate, pubescent along the midrib and nerves, deep green above, pair beneath. Corymbs broad, 5 - 5-8 cm, usually terminating short leafy branchiets Flowers greenish-white Calyx accrescent Corolla bilipped. Anthers back. Fruits globose, dark purple, endocare hard, globose, 4-ceiled.

A few trees and shrubs have been planted on the outskirts of Sara-Rohala Gardens, growing along the unmetalled road, where they flower

and fruit annually

Flowers and Fruits: July-Sept.

J. K. Maheshwart 1, 17, near Bagh Peeperwala (Sara, Robilla)

Gmelina Linn.

Unarmed, small trees; bracts small Spinous shrubs, bracts large, coloured

G arborea G philippensis

C. arboren Roxb Hort. Beng 46, 1814, nom nud & Pl. Cor 3 42, Pl. 246, 1815, FBI 4 581, FUGP 2 220; Parker, For Fl. 397 A small, deciduous tree Young parts clothed with pale yellow tomentum Leaves broad ovate, acummate, base cuncate Flowers brownish-yedow, in pameulate cymes. Drupes pyriform or obovoid smooth, endocarp bony

Planted in the lawns of gardens Most of the flowers fall off and only a few develop fruits. The tree does not thrave well in the area

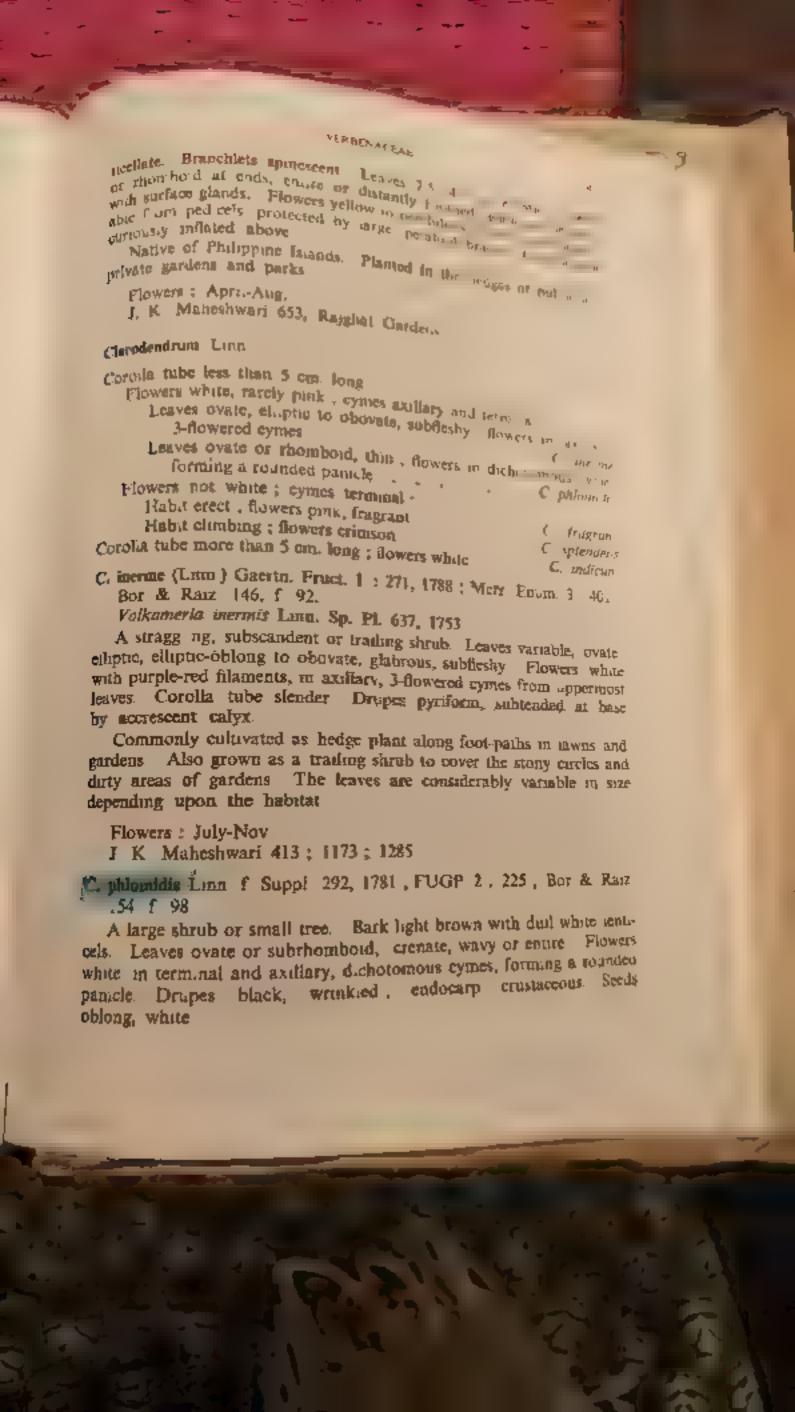
Fruits: March-May

J. K. Maheshwari 1031, Lodi Gardens

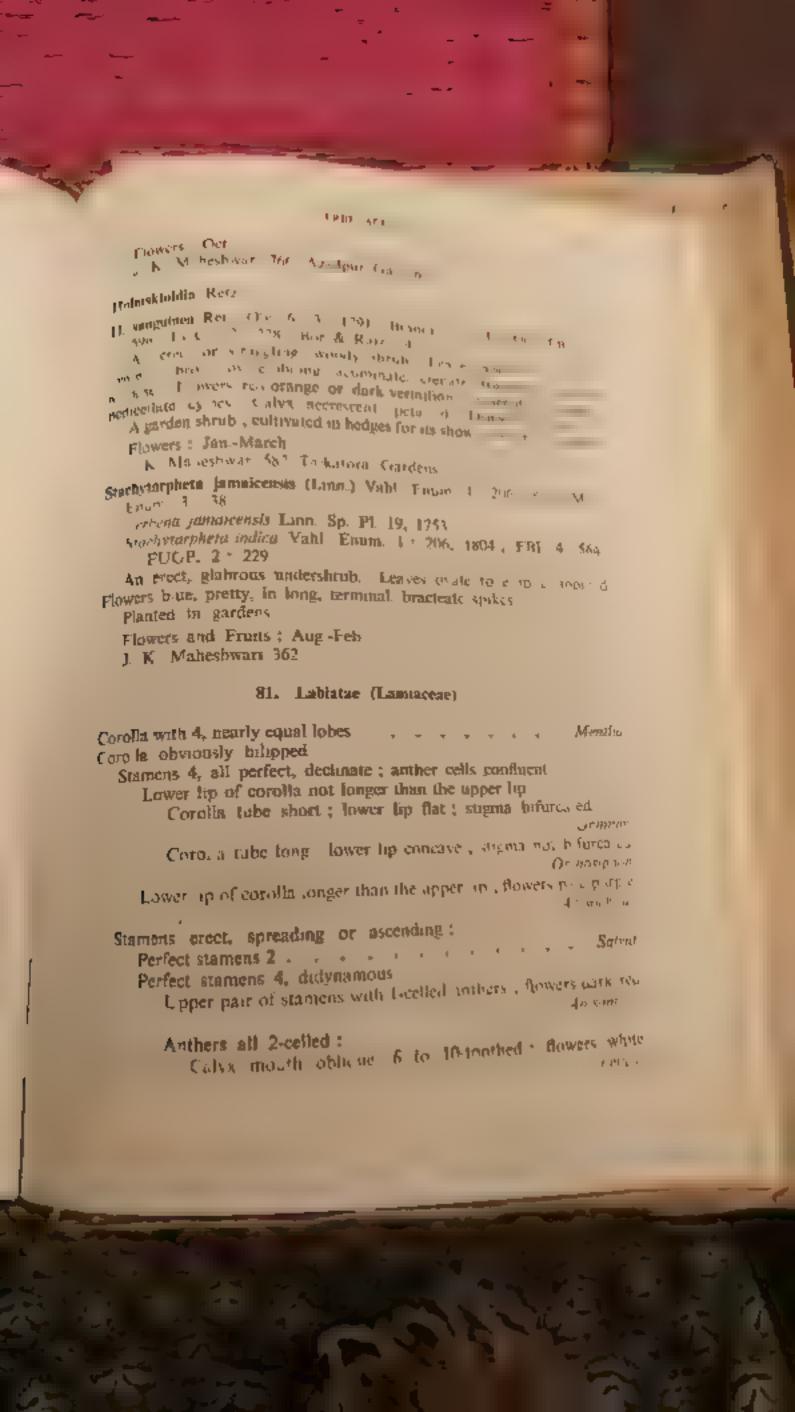
G. philippensis Cham. in Linnaes 7 109, 1832 : Merr Enum 3 1 399 . Bor Man Ind For Bot. 302.

G hystrix Schult ex Karz in JASB 39 . 81, 1870

A large or medium-sized, straggling, spinous shrub Branches len-



TORK OF PECH Occurs the Ridge bearing of most with the enter emission The Literature of the first and other shrubs. Also proved in the reduce of providing the first are often attacked by inscess it a respect of providing them. process as a corolar other **[**]0 Local parties Act ţ[. Liowers Acp No. J. K. Maheshwert 787 Ringe Chagrans Vert Jord Major t 70, 1804 Baray Maje Ca. pt 845 Bor & Rutt 44 1 04 art. An erect sweet since up shrub or tookershrub. Leaves 15 pe or more hand evace enamely too thed truncate or cord to west cotra flora ghods at base of lamina. Flowers pink very fragram in temporal or chack, showy corymbs. Grown as an ornamental in public and private gardens and tru ( prohatds, or is very fragrant flowers Local name. At ardaga Flewers Sept -Oct J. K. Maheshwari 468, La katora Gardens C. aplendens G. Don in Edmb. N. Phil. Jour. 11: 349, 1824; Badley, Stand Cycl Hort I 800 A cambing shrub. Leaves oblong orbicular to suborbicular critica conaccous, dark green above, cordate, acumunate. Flowers cramson n dense, many-flowered, criminal, showy cymes. Drupes back Grown mong the trel is and walls of gardens for its gorgeous blossoms and dease screen of forage. Flowers: Jan -Feb. Frants: March-April J. K. Mahesawari 1192, University Gardens C. Indicum (Linn.) Kuntze, Rev. Gen. 586, 1891., Badey, Man. Cult. Pl. 845 Sephonarithus indica Linn. Sp. Pl. 109, 1753 Cerodendrum siphonanthus R Br in Ait f Hort Kew 4 65, 18 2, Bor & Raiz, 144 A tall glabrous shrub, 12-, 8 m high. Stems hollow, ridged. Leaves usually 4-nate, glabrous 17 5-20 - 2 5 cm., narrowly lanceolate, aperio, at base entire, sinuate or lobulate. Pameles lax, terminal, mochecic ngate. I owers white. Bracts reddish when young. Calyx accrescent. Corolia narrowty funnel-shaped, tube 8 cm or more n rength. Nutrets 4, in a persistent calarged calya-Common in the fruit orchards as a shrubby undergrowth. In Galab Bagh near Sabzimana, it grows abundantly in some parts beneath the trees.



Catys subbriabusts, S-toothed; flowers blush-purple Arepeto.

Meeths Line

M. spicets Linn Sp. Pf 576, 1753; Bailey Man Cult P 863 W wiesd's Lina. Sp. Pl 804, 1763.

An aromatic perennial glabrious, ascending herb. Leaves 4.5 0.3 cm sessie, ovate anceotice sharply terrate. Flowers white in many. flowered whorly, arranged in 6 - 1 cm apixes

Cultivated in gardens and as a field drop in Timarpur during with or

months. Used for culinary and medicinal purposes

Local name: Podina

Flowers and Fruits: May-June

J. K. Maheshwari 105

Octation Line

Catyx hairy within:

Fruiting calyx 3 mm. long and corolla 6 mm O americanuni Fruiting calyx 6 mm fong and corolla 10-12 mm O. bastheum Calyx glabrous within

Pedicels as long as or longer than callyx, bracts not exceeding callyx

Pedicels shorter than calyx, bracts longer than calyx

O gratissimum

O. americamum Lann. Sp. Pf. 833, 1753 (non Jacq.).

O. canum Sims in Bot. Mag. t 2452, 1824, Royle, Ill 301, FBI 4 · 607; FUGP 2 · 234, Mukerjee, Lab. Ind Emp 17

A bushy, much-branched, pubescent herb, woody at the base Leaves 3.5.5 x [.5.2.5 cm., elliptic, elliptic-oblong to elliptic lanceolate, entire or subcrenate. Flowers pale violet or purplish-white, in whorly of 4-6 on an erect, 4-9 cm. long, lax inflorescence, pedicels recurved Corolla exserted, up to 6 > 3 mm Nutlets ellipsoid, b.ack, 1 5 x 1 mm

Common on the Ridge and the neighbouring hilly tracts during monsoon months on gravely soil or amongst stones, in open or depressed

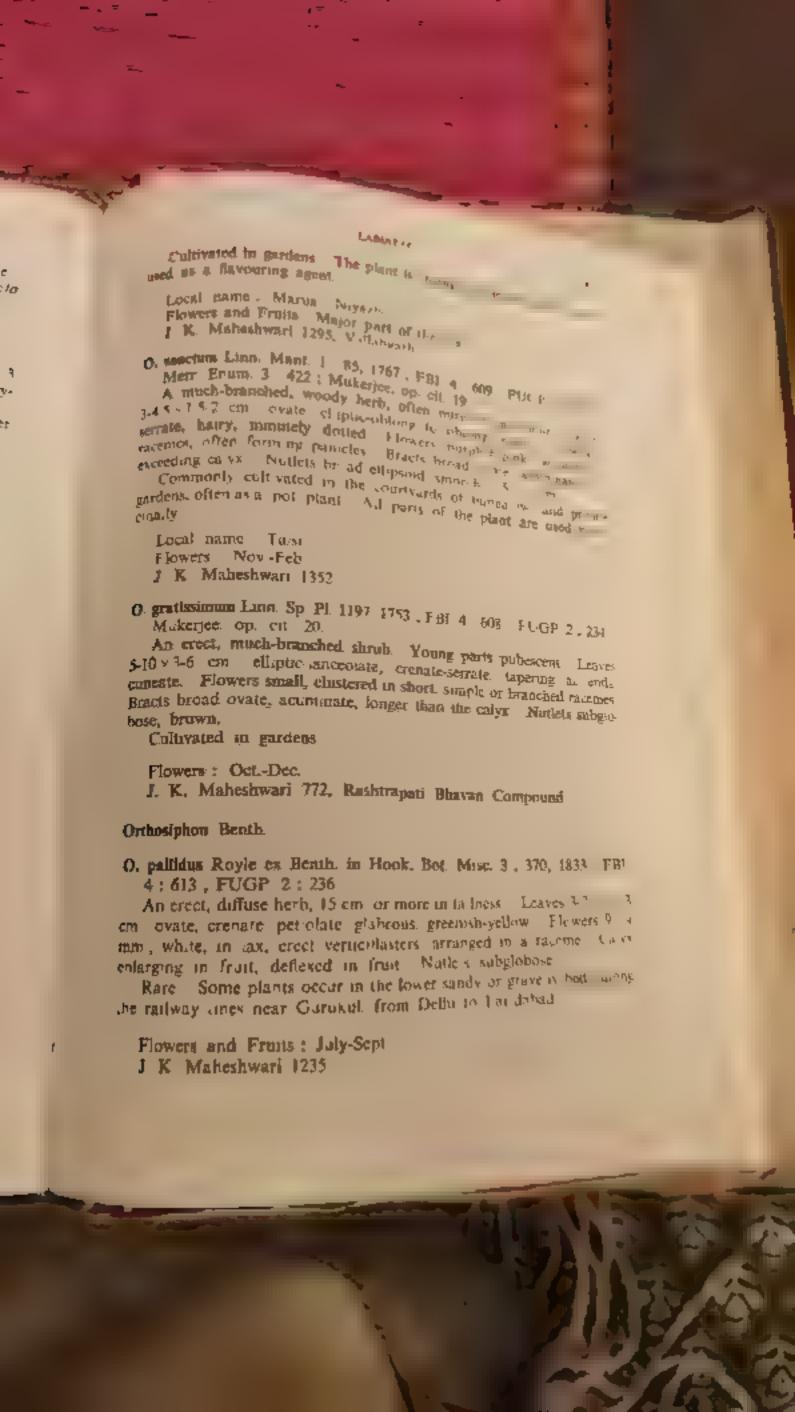
places, often becoming gregarious at some spots

Local name: Bantulsa, Tuissband; Jangli misa Flowers and Fruits : July-Nov.

J K Maheshwari 255, 1081, New Delhi Ridge

O. basilicum Linn. Sp. Pl. 597, 1753 , FBI 4 \* 608 ; FUGP 2 \* 235 Mukerjee, op. cit. 18

An erect, herbaceous plant, 0.6-1 m tall. Leaves ovate-lanceouste, entire or toothed. Flowers whitish pink or purplish, in whorls on simple or branched racemes. Nutlets brack, pitted



Anthochiles World

4 carpones Wall Pt. As Rar 7 18 (93) Rosic 11, 30 FRI 4 627 FFCP 2 NO Mikeree op en 58

Royleting it records this species from Dello to Ataliahad a my

he hanks of lam one. I have not some act a he plant

An erect on tal 40% on high. Stems planter 8 cr. parsely pubeerel offer need with red I caves rather flexive \$ 6 3 5 to bross, vote notice cremite. The wers paid notice in 13.4 m. mg spikes Notice's a hermondum compressed polished brown

La name Paren

Salvia i con

Single shriphs in undershraps, leaf bludes usually 0.5-2 cm, long Calya with gland-tipped hum; corolla annulate within

Catsy with very long eglandular hairs, corolla exampulate 8 santolmuefana

terbs leaf biades usuady much exceeding 2 cm S picheia S. zegyptiaca Lato Sp P 23 1753 , FBI 4 656 , FUGP 2

Makeriee op eit 107

A few much-branched herb, up to 20 cm, high Branches spreading hairy or scabrio. Leaves tuited, 3-6.3 < 0.5.1 cm incar inneedlate tapering at enus, dentate. Flowers blush or white dotted with blue in distant whorks of 2-6 arranged in erect or ascending racemes. Calyx harry Nutlets oblong-etipsoid, black.

Occars in the neighbourhood of Delhi-

S. santolinaefolia Boxss. Desgo. Pl. Orieo. (ser. 1) 13, 1859 & Fl. Orieus 4 632 FBI 4 656, Makerice op. cit, 108

S aegyptiaca Linn, var pionila Hook, f. in FBI, 4:656, 1885; FUGP 2 356

Differs from the preceding one in being more scabrous and vious Leaves very rigid and rugose. Calyx longer, villous with long hairs.

Common on the Ridge as well as in the billy tracts near Mehrault and Firedabad on dry gravely soil or in the crevices of stones. The plant extract is used for gonorrheal troubles.

Local name Gulab-gosh Flowers and Fruits: July-Oct. J. K. Maheshwari 1082

S. plebeig R. Br. Predr. 50t, 1810. Merr Enum. 3 · 413. Mukeriee

An erect deep-rooted annual 90-120 cm tall Stems stout, bronched, 4-angular, grooved Leaves 2 5-7 5 - 2-4 cm, oblong-lanceoBIC grill. Jets. 77 3

Apl

the ला dai

5PI

po

ØF. ₩. bu

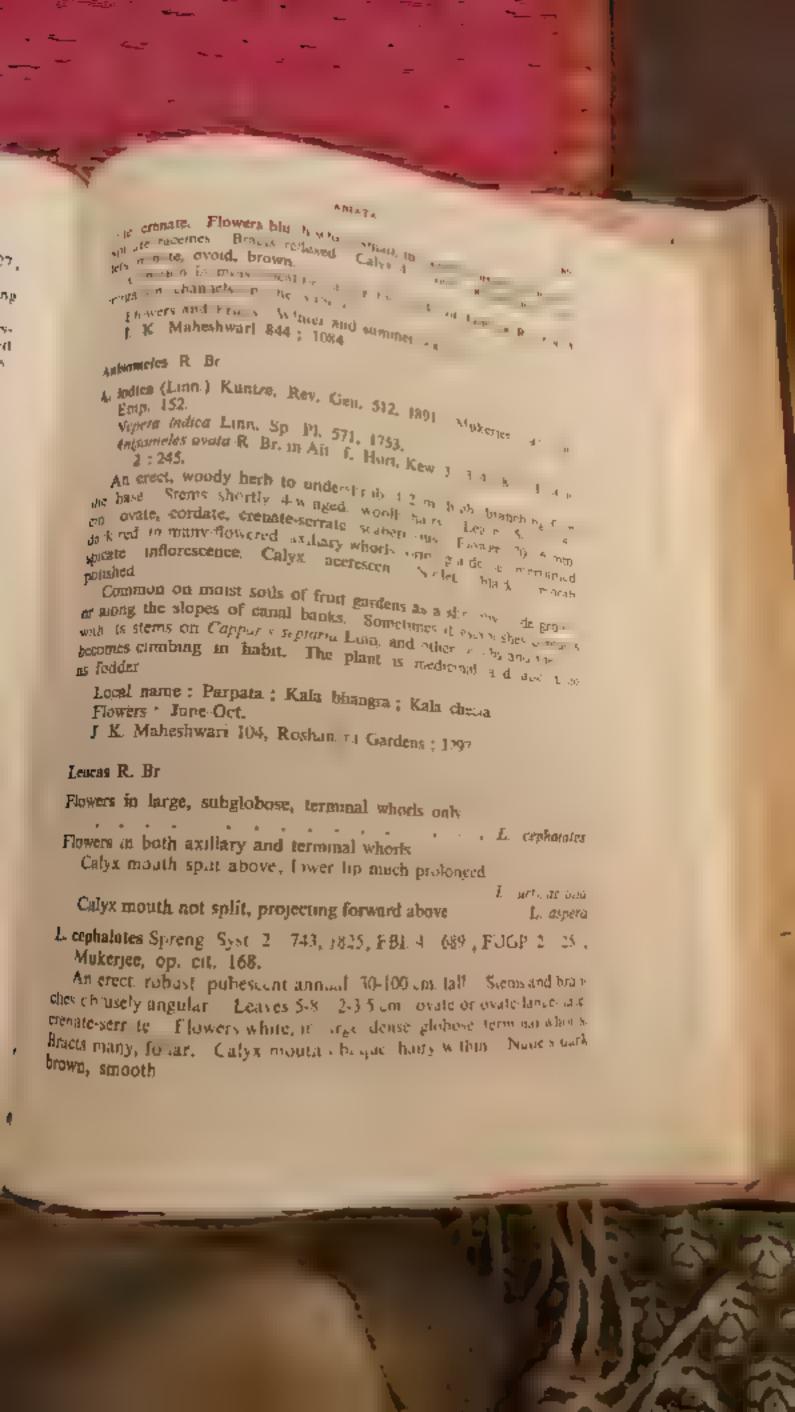
**EL5** 

F

Ļ

C CI

> U b



Common along the borders as well as in the fields of winter scason crops.

Local name : Gubbha Flowers and Fruits Aug Oct J. K. Maheshwari 330, 395, 1307

In unticaefolia R. Rr. Prodr. 504, 1819, FRI 4 ± 680, FUGP 2 ± 249

Mukenee, op. oit. 166

An erect or diffuse harry herb Leaves 4-6 × 15-3.5 cm., ovate cruesely toothed. Howers white in dense globuse white Bracks mear or sub-late lancouste collate. Calyx mouth very oblique. Note lets obovoid-obling trigonous, beown.

Common in and a ong the edges of cultivated fields in visages

Local name , Goma; Gumma

L. aspera (Wilid) Spreng Syst. 2 743 1825, FB1 4 690, Ft GP 2-250, Merr. Enum. 3 410 Mukerjee, op. cit. 166

Phiamix aspera Wild in Link, Enum. Pl. Hort. Berol. 2 621 1822

An erect of diffuse, much branched both, but of throughout. Leaves

An erect or diffuse, much branched herb, havry throughout. Leaves ethptic mean subcatire to crease. Howers white, in terminal and axiliary up to 2.5 cm, across whorls. Bracts linear, finform, chiate Natiets objoing, smooth, brown.

Common in fallow and cultivated fields.

Local name: Gophs
Flowers and Frints: Aug.-Feb.
J. K. Mancshwari 830

Nepcta Linn.

N. hindostana (Roth) Haines, Bot. Bih & Or 744, 1922, Mukerjee, op. crt. 133.

Glechoma hindostana Roth, Nov. Pl. Sp. 258, 1821

Vepeta ruleratis Buch Ham ex Hook f in FBI, 4 661, 1885, FUGP, 2 - 254

A harry herb, with several branches from the base. Branches 4-angular, grooved. Leaves 2-3.5 × 1.5-2.5 cm., ovate, broad ovate to suborbicular, coarsely crenate-serrate. Frowers 5-7 × 2-3 mm., bluish-purple in stalked axillary, dense cymes forming dense, speciform thyrses at the top. Nutlets oblong, brown with white dots.

Rare Found in the marshy places near Shahdara

Flowers: June-Aug. J. K. Mahashwari 1228, Shahdara



R1. Plantaginareae

Plantago Linn

Leaves narrow, linear, finely acumusate plants cultivated Loaves broad, avaie to obsong avade obline or subson o

P negra

P. oveta F risk F. Aegypt Arab 31 1775 FB1 4 707 FI GP 2 262 Durb e & Lutier Liebl & Ceard Chieps J 31 c 92 P. major P opaghula Roxh Fl Inc + 400, 1842

An erect almos stemess annual, Leaves 10-25 at cm., woolly hairy linear, occuminate Scapes straight erect. Flowers in , 5-4-5 0.8-1 cm, cy endrie or oyold spikes. Bracis wanged. Capsules 2-scoded

Cultivated for the seeds, the muchage of which is used in local predictnes for desentery and d sorders of the dignitive system

Local name . Isaphgot Flowers and Fruits . Jan - March J K Maheshwari 934

P. major Linn. Sp. Pf. 112, 1753 FB1 4 705 FUGP 2 65 Merr

A perennial, stout, glabrous herb. Leaves radical. 8-25 x 4.7 cm. ovate or obiotig-ovate, cutive or sinuate-toothed decurrent, petioles sheathing Flowers crowded in long slender cylindric spikes, 8-20; 0.8 cm. or more. Corolia lobes reflexed. Capsules 4.5. 2-3 mm. ovaie. glabrous, carcumsciss. Seeds dull black

Uncommon Occurs near canal banks or moist places in Rushanara, Azadpur and Sabzimand: Gardens.

Flowers and Fruits: Major part of the year J. K. Maheshwari 124, 21-Bigah Bagh (Azadpur)

# 83. Nyctaginacese

Scandent or straggling, thoray shrubs, bracts large coloured . . . . . . . . . . . Bougainvillea

Erect, straggling or subscandent herbs bracts not coloured Flowers showy, in a calyx-like involucie

Murobilis

Flowers small, in heads of umbels, bracts minute

Boerhavio

Bougainvilles Comm ex Juss corr Spach nom cons Persanth tube densely pubescent, leaves and stems pubescent B spectabilis



Res

Persanth tube more in less puberalen icoves and storas

subgraphic in

R. spectabilis Wolld. Sp. Pt. 2 \* 348, 1709 (Buginvilloca). Merr. Epuin.

A woods was dear in track one combine in hope we he relief to raw beaves and stems probession. I respectively to a contract which have small vellow clustered at the ends of branches. It acts 3, large strong to shades of red, exceeding the flower. Actions 5-ribbed

Commonly cul evated as a decorative of inher to garde a land law-s

for its handsome bracts

Flowers : Jan June J. K. Maheshware 101

B. glabra Cho sy in DC Prode 13(2) 437 1849. Bailey in git

A scandent or stragging should I caves and stems glabrous or the glabrous in pines at a ght or a most lacking. I caves broad ovate to ovate-obling. Erects magenta or purple-coloured

Native of Brazil. Culmvated in gardens

#### Mirablita Linn

M jalapa Lum. Sp. Pl. 177-1751; Meer. Enum. 2: 132; Bailey, loc c,1
An erect, much branched berb or undershrab | Leaves 5:10 × 3-6 cm ovate, truncate or cordate | Flowers 6:4 cm, white, red or yellow showy, in a calyx-like involuere | Corolla tube clongated | Fruits reathery

Native of Trop. America. Commonly cultivated as a pot plant in private and public gardens. The flowers open late in the afternoon

Local name Guabbas; English name Four O'Clock Flowers and Fruits; Aug.-Dec. J. K. Maheshwari 363

#### Boerhayla Linn.

For a correct spelling of the generic name, we Sprague in Kew Bul. 348,

Leaves in regular pairs, flowers smaller, in heads

Leaves in nearly equal pairs, flowers larger, in long-pedicelled umbels

. B repanda

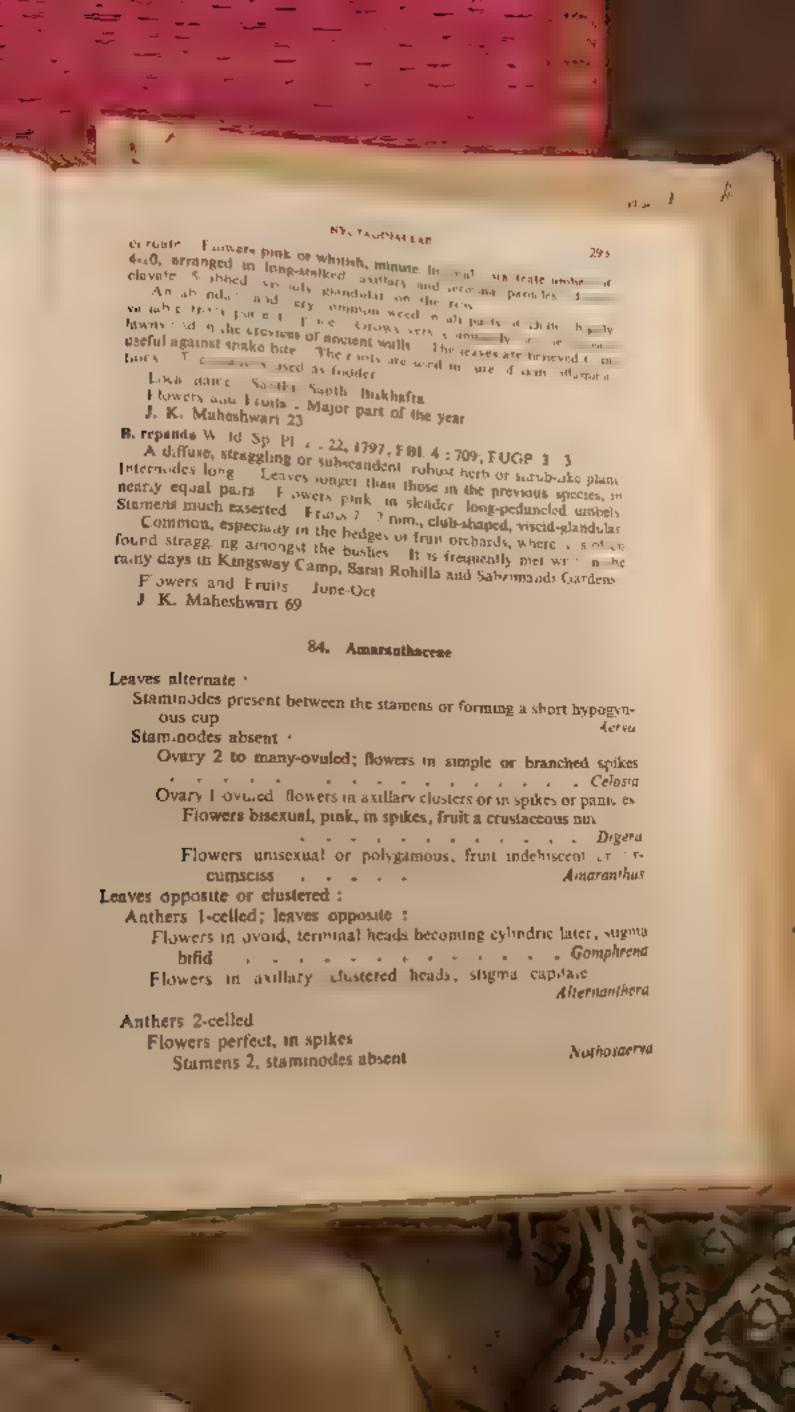
B. diffusa L on Sp Pl 3, 1753, FUGP 3 . 2

B. trpens Lion Sp Pl 3, 1753, FBI 4 709

B. procumbens Roxb Ft (nd 1 | 146 1832)

A spreading, much-branched terb prostrate or ascending along walls Tup out stou. Leaves in unequal pairs, broad ovace or suborbicular,





THE PLOKA OF DELIM 294 Stamens 5 with interposed stammodes As le ranthes figurers fascicled, perfect flower one, imperfect ones reveraging, Pupana hnoked bristles Aerys Forsk, nom, cons. I is a correct spelling of the general name tee Spragge to Kew Bor. 142, 1928, Sp kes only anthony, flowers uni- or bisocual . . . Spikes ski fary and terminal flowers directous: A. Jaosta (Linn ) Juss. in Ann. Mus. Par. 11 : 131, 1808, FBI 4 728 FUGP 3 16, Mert Enum. 2: 130 A h families lunara Lion Sp. Pt. 204, 1753. A subcreet, prostrate or diffuse herb. Stems and branches woo y tomentive a cases 2.4 - 1.2 cm, alternate white won ly beneath, obova o

A subcrect, prostrate of diffuse herb. Stems and branches woo y toment, so a cases 2.4. I 2 cm, alternate white woo ly beneath, obova o of our a rounded. Spikes 0.5.1.5 < 0.5 cm., clustered in the ax s. Flowers green, shown to bisexum. Anthors vellow. Seeds black shins in Common all over the area, especially in shady spots in garden hedges and fields. Leed in the treatment of wounds.

Local name ' Gedna ki chal Flowers and Fruitz : After rains

J. K. Mahoshwari 344, Ridge; 405, Azadput Road

A. tomentosa Forsk Fl. Acgypt-Arab 122 & 727, 1775, Fl GP 3

A javanica Juss. in Ann. Mus Par 11 131 1808; Royle, I.1 320,

An erect, woody-tomentose herb or undershrub, up to 1 m. tall, branching from base. Leaves 2.5-6 0 5-1 cm., ovate-lanceolate, linear oblong or linear greenish white Flowers unisexual sessile, in dense, white-woodly brown, polished. Seeds dark.

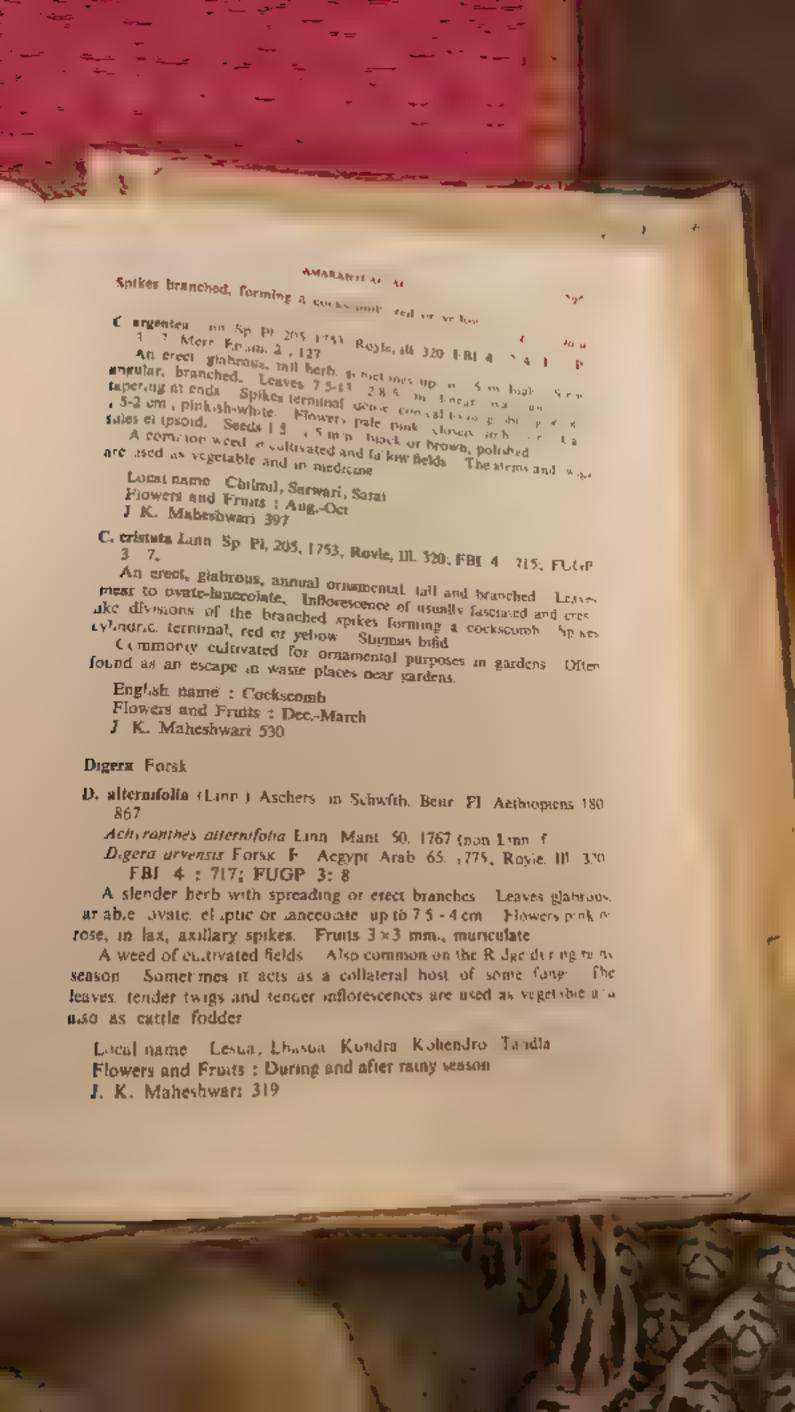
Common in weste places and unused ground near fields and the hilly tracts of Mehrault and other places. Some plants, grown in the garden narsery flowered almost throughout the year. The female plants are very common but the males are extremely rare, still the plant produces seeds, prohabily parthenogeneticany. The flowering tops are sold in the nurker for decoration.

Local name Dhollmandt Dholphulio, Kamheda Ficwers and Fruits After rains J. K. Muheshwari 343, Hada Khas , 1332

Celonia Linn.

Spikes unbranched, pale pink, dense

C argentea



Amerenthus Linn

Bractooles award or setaceous, equalling is exceeding the tepa so forth COPICE PUBLISH

Stances 5 tepals 5 Spinous heres or undershrubs , leaves tivate or oblong, charge

Spineless herbig leaves ocute or acuminate

4 hebridgess, Sty Stanta v v pacardatus

Stamens I tepals I cases this se of emitty in c. A rie dee Brauteofes water hardy award shorter than the tensis france ready in to hiscoint.

Freits with an actic open indefineent, rug ise flewers it an are coasters and in terminal papie ed spikes.

Free s with a blant apex. If overs to ax flary clusters and terminal simple or lobed spikes, fruits orb cular or broad ovate

A hatum ver oleraceu

A. spinosus Lum Sp. Pt. 991, 1753 | BI. 4 : 718, FUGP 3 : 10; Mer-Foum. 2 128

An erect or diffuse, spinous herb or undershrub. Spines sharp stra gh. divaricate Leaves 35-6 - 15-2 cm ovate or lanceo a e. spine uppea base cuneate. Flowers green, unisexual, in dense axulary, more or less globose clusters or in terminal and axiliary, interrupted spikes. Maie flowers with 5 stamens. Capsules ovoid longer than broad Seeds dark brown or black, shining, 1 - 1 mm

A weed in cultivated fields and gardens. Common in open, waste places, on the slopes along roadsides and railway lines, near dirty water canals, etc. becoming gregarious and abundant at some spots. When the plant dies, the erect or prostrate, woody stumps are left on the ground for some time. Used as cattle folder

Local name : Kantevali chular; Goja

Flowers and Fruits. During and after rainy season

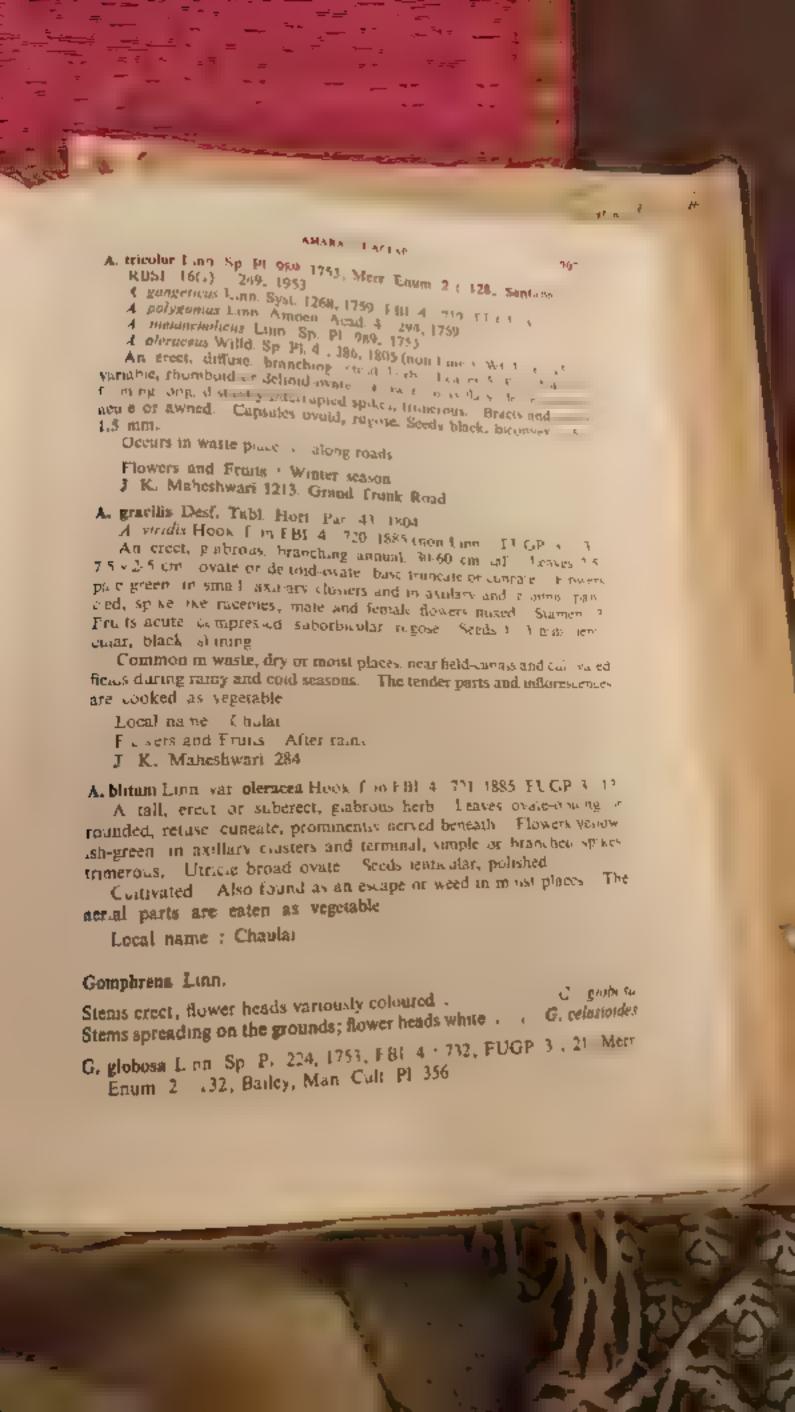
J. K. Maneshwari 82; 239

A. hybridus I am subsp. cruentus Thell var. panieulatus Thell in Aschers & Graebn Syn 5(1) 247, 1914, Santapau in RBSI 16(1) . 250, 1953 A panicularus Linn Sp. Pl 1406, 1763, Merr. Enum 2 128

A stout, branching, tall herb. Stems grooved Leaves 5-12 - 2-3 5 em, ovate, ovate-oblong to ovate-lanceolate, prominently nerved beneath. base cuneate. Spikes dense, reddish-green or yellow, forming a close panicle the central spike the longest. Flowers pentamerous. Capsules

Occurs as an escape near fields, lawns and hedges.

Flowers and Fruits ! Oct.-Dec. J. K. Mahoshware 250



. 5 1 mm

Native of S. Brazil, Paraguay, Druguay and Argentine A recently n reduced weed, which is rapidly spreading throughout De h. It is found amongst grasses, on roadsides and cultivated ground, in garders and lawns, becoming troublesome at places.

Local name Kasm Flowers and Fruits . April-Aug. I K Muheshwari 185, Azadpur Road

#### Alternanthern Forsk

 $r_I$ 

Leaves suborbicular or nearly circular perianth segments spine-tipped, Leaves linear-oblong, elliptic or oblanceolate, perianth segments not spine-Lipped, stamens 3

4. pungens H B. & K Nov Gen. & Sp. 2 206, 1818; Melville in Kew Bull. 174, 1958

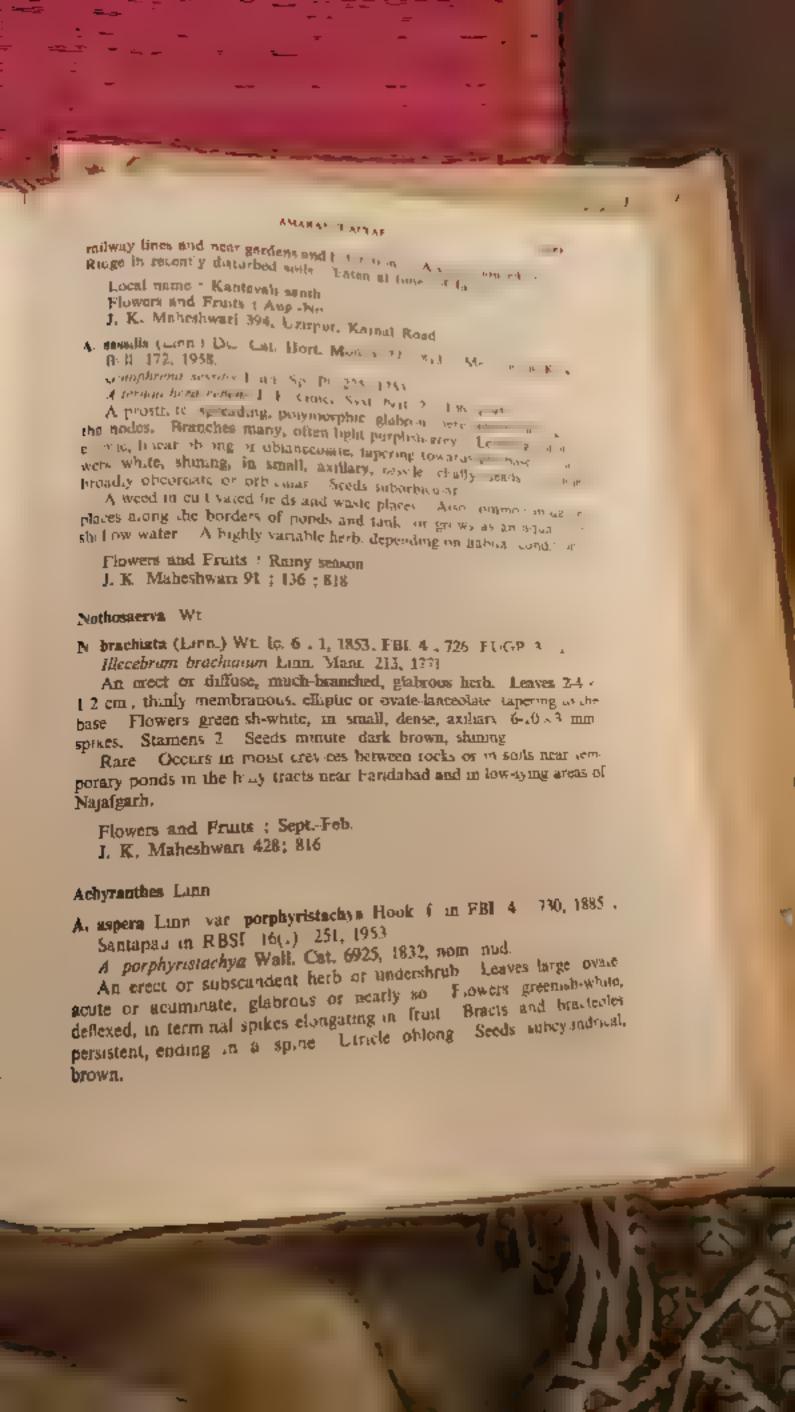
A echinuta Srv in Rees. Cyclop 39 Suppl., No. 10, 1819.

4 repens Link, Enam. Pl. Hort. Berol. 1 154, 1821 (non.) F. Gmel.

A prostrate or decambent, spreading herb. Stems zigzag, clothed with shaggy bairs. I caves suborbicular or nearly circular, obtuse, entire, tapering at the base, hairy. Flowers in axillary heads. Tepals becoming spiny in fruit. Stamens 5.

Native of Trop. America A receptly introduced weed, has become well established along roads des in fallow helds, waste places, along





Common throughout the Ridge, in waste places, along fences of gardens, site. A very troublesome weed when in fruit, due to it the troublesome weed when in fruit, due to it the troublesome beauteoirs and nomied tepnis. The ash is used in the treatment of cough and the flowering spikes and south are used against smake him. The derection is given in renal drops)

Free name therekunda Lapa Chuch in dalvala and a Monga

Flowers and Fruits . Throughout the year

A M hes water 854

Papalin auss P of cons

P. Inppacea et or 1 Just in Ann. Mus. Per. 2 .. 32, 1803, FBI 4 , 724 F CP 3 19 Metr. Fram. 2 .. 129

Granulic supposed Lord Sp. Pl. 204-175

An erec it straggering we by undershirth transming from he base Intervides long a cases orate or elliptic soft offentose. Flowers in axiliary and technical tring spikes. Bristles nooked accrescent sternic tery spreading velocitists at maturity subtended by a 3 nerved at state braceoic. Personth worldy. Stamens pinkish. Seeds black, po sled

Commen especially in the hedges of fields and fruit orenards. A so mer with in the haly tracts, in depressed areas or growing amongst the

thorny shrubs.

Local name - Jhojhru; Din ka tara, Bhurat; Chirchitta Flowers and Fruits \* After rains J. K. Maheshwari 317, Old Delhi Ridge

## 85. Chemopodiaceae

Flowers usually besexual, all similar :

Leaves flat :

Roots not tuberous, plants wild.

Fruiting perianth with transverse wings Fruiting perianth not winged

Kochia Chenopodium

Leaves firshy, half-terete :

Persanth lobes tennsversely winged.

Persanth lobes not winged.

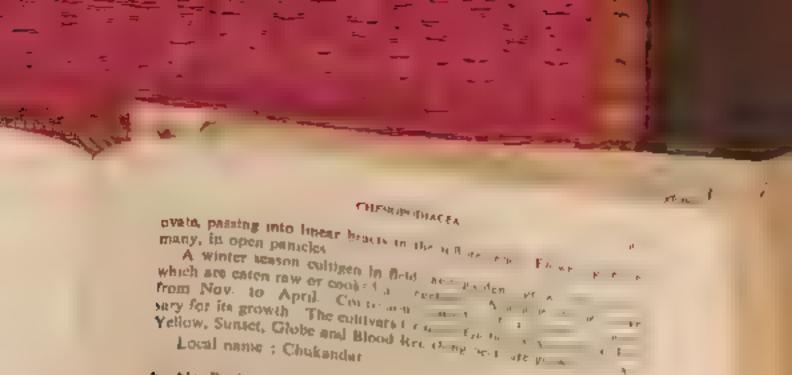
Salsola

Flowers unisertial dimerphic; stricle enclosed in a capsule-like, bracteal

Bets Linn.

B. volgarie Linn Sp. Pl 222, 1753, Bailey, Man Cult Pl 353
A glabrous, tuberous herb—Leaves mostly basal, ovate to oblong-





#### Rochin Roth

A refer of airfuse much branched bash substant with a result of the part of th

A so-called intracte plant found on dry soil, on unused crease a the roadsides and dry cana, hanks often gives the organization of an occur in the hilly parts but can be seen in areas area. Only the Okha and Najafgarh. Also common near the aerodromes in the hilly be the leaves are larger and home close the entranched on flowering shoots they are smaller and home close the entranched much liked by caracos and cattle. The dried plants are used as firely

Local name: But Flowers and Fruits: July-Nov J. K. Maheshwari 122, 440; 475

# Chenopodium Linit

Strongly foet d-smelling undershrubs, stigma, usually 5

Cambro des

Tall or short, scentless herbs, sugmas 2 :

Seeds smooth, shraing
Seeds rugose, dull black
Contain

C. ambrosioides Linn. Sp. Pl. 219, 1753, Mert. Enum 2; 125; Haines Bot. Bih & Or. 770

An erect strongly for in-smilling was a poem has much-branched shrub 90-150 cm to often gregatious policy after the stems ribbed, often purple-tinged leafy. Leaves 4.10 - 2- ham ob ne-ovate, simulate-dentate, the upper subentite. Flowers greenish, some turning to purplish in small clusters forming slender, axillary, interrupted and terminal, simple or particulate spikes. Bracis fleshy. Per anth 5-tobed, clasping the fruit. Stigmus associally 5, spreading. Utricle membranous, 1-seeded. Seeds brown, polished, smooth, about 1 × 1 mm.



Conflain. top !

40 the

Park

5 1

CZC

4 8

損

Native of Mesico. A recently introduced wood, often grows gregar. susts either by isself or along with Aunthum strumarium I, on , in most, a disturbed, waste places near gurdens and along roads acs. The plant em ta a strong camphoraccous offour

Local name Khatao Lossers and Pruits - April-Sept J. K. Maheshwari 154 Shahdara - 987 near Azuripur

C. olbum Linn, Sp. Pt. 219, 1753, FBL 5 13; FUGP 3 122 An erect herb, green or coated with white, mealy, gran for puberconce Stems ribbed, accord to full points meaves variable to size enare, trothed or lebed, the inbicarblong or detail assite. It swers to

termina and ay any clusters forming compact painted so key the terminal spikes becoming thyrsoid. Sistes 2

A common waster and summer weed in was a places and dry gravel y so is of any cit commissioned cultivated grounds is metames cur ivated. There are was contaments crops every year in fallow he ds, the summer plan's being somewhat bitter. Some abnorma, spec mens attain a neight of 1 m or more. The cases and tender twics are used as regetable and also in a cord preparation known locally as 'Raita'. Also used as feedder

Loral name : Bathua, Chanden bathua; Bathu Flowers and Frints . Aug.-Dec J. K. Maheshwari 986, 1346.

C. murale Linn Sp. Pl. 219, 1753, FBL 5-4, Ft GP 3-23

A glabrous, creet herb. Stems 15-45 cm high ribbed. Leaves 4 .0 . 3.45 cm, or line rhomboid or or ate-delicid. 3-nerved at base, obed or sharply toothed. Flowers green, in clusters of lax or dense, ax. lary divaricate cymes, the terminal particle leafless. Stamens yellow orbicular, dull black, rugose

A winter season weed, common in moist, shady situations in cult

vated fields, waste places, etc. Used as fodder

Local name : Khartua Flowers and Fruits: Dec.-March J. K. Maheshwari 1164

### Salsola Linn

S. baryosma (Roem. & Scholt.) Dandy in F W Andr Fl P. Anglo-Egypt. Chenopodium baevosmon Roem & Schult Syst 6 269, 1820 Salsola foetida Deliie. Ft Egypte 57, 1813, nom nud . FBI. 5 . 18.

An erect, much-branched, ascendingly spreading, hoary undershrub.



# FRENCIPODIACTAL

Stems pare or purplish in vegeta to take Branche tal Leaves minute, broad ova e to subge a c into the files of the state of georescent with bread hory rise mendiana sing Common in the same and the water thirdy tracks a second uself or associated with Spacedo from conditions and the analysis and the to were June Sept Ive a Winer course 1 K. Altrieshkori 282, Okha-

Saacda Forsk, ex Scop

Stigmas 3 Sugmas 2 .

S. froticosa (1 no) horex 31 Augypt-Atab. 70, 1775; Ful 5 FLGP, 3 ; 24, Parker, For Ft. 416. Chenopodium fruta usum L nn Sp Pl 221

An erect or prostrate much branched under crab Second purp sh tinged, branches herozoftally spreading or extending to a mending to a mending to the mending of the second or the secon 5-15 2-3 mm crowded an round the axis, succeive that it ries of oblong. Flowers green, bisexual, turning red as nature at any soldary or clustered, the upper ones form by stender day k Perianth persistent. Utricle turbinate, membraneus, sporgy Sociaob! quely ovoid, beaked, black, shining,

Abundant in the saline tracts and unused fallow ground where dominates the vegetation letter grows a litself or associated with State of baryosma Dandy Kochia indica Wi Chenopodnio albian Law Specifichis marginatus Hochst, Athagi pseudalhagi Pew and f essa cre a Limb Very common on the waste lands near Model Town asset as cattle fodder and the dried parts are burnt as fuel.

Local name : Bur; Lonia; Nunkhuri Flowers and Frants: Dec.-June J. K. Maheshwart 1101

S. maritima (Linn.) Dumort. Fl. Belg. 22, 1827, FB1. 5, 14, Fl. GP. 3, 25. Chenopodium maritimum Line Sp. Pl. 221, 1753.

An erect, annual, robust herb. Stems woody branches many him-Leaves I near oblong, fleshy, borne all round, often turning rea at maturity. Howers in small, subglobose clusters, forming sensor loose, clongate spikes. Permitte of 5 fleshy lobes, enclosing the frui-Stigmas 2, whitish. Seeds black, shining

Common in the salvae tracts and fallow fields, especially near Osbia. Shahdara and Timarpur often dominating the ground with its aease growth.

Local name : Bur; Lonia; Nunka Flowers and Fruits; Dec.-June



Buth prockly-seeded (triangular-leaved) and smooth seeded or not reased) satisfies are cultivated ournig was et scason in fields and garden for its leaves which are much used as vegetable. Often spontaneous is moist, waste places near gardens. Sold throughout the year

Local name , Panck Flowers : June-July J. K. Maheshwari 36, Tunarpur

#### 86. Bayellacene

Вазева Сиги.

B. rubra I mn Sp. Pl 272, 1753. Lamk Tab: Encycl t 2 5, f 1, 1792, FBI 5 20, FUGP 3: 27; Merr Enum. 2: 137

B. alba Linn. Sp. Pl. 272, 1753

A glabrous, twining succulent shrub. Leaves broad ovate, cordate, subsuccident entire, glossy. Plowers pinkish or pale purple, in lax, ax nary pedencied spikes. Penanth fleshy. Utricle black, overd. Grown on treal ses and hedges around gerdens for its leaves which are

used as vegetable

Local name: Por Flowers and Fruits: Sept.-Feb. J. K. Maheshwari 486

# 87. Polygonacene

Habit erect; ocreae large;

Perianth 4 to 5 merous, segments not toothed stigmas cap tellate

Perianth whorks 2 each 3-merous, inner segments enlarged and toothed or comb-shaped; stigmas fimbriate

Runiex

Antigonom

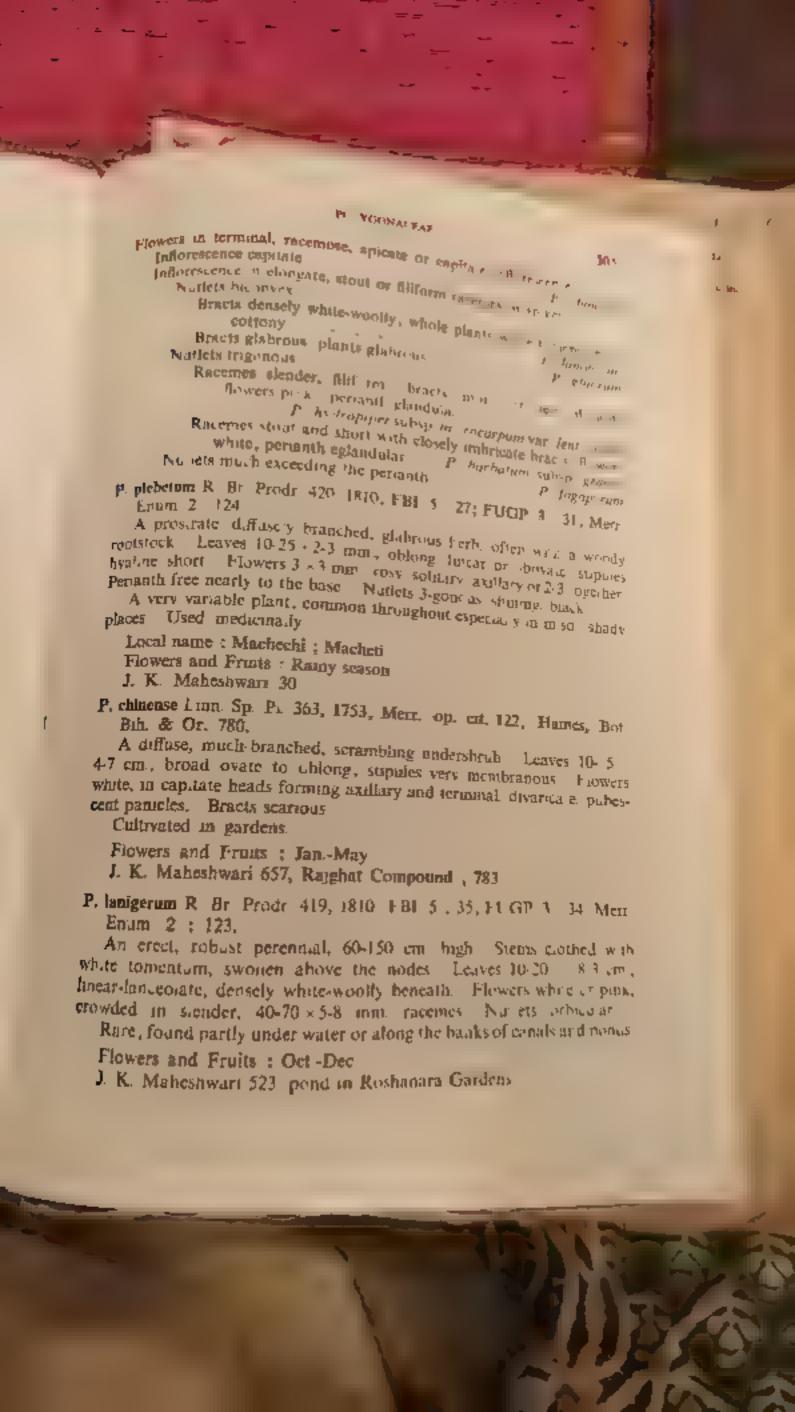
Polygonum Linn

Nuclets nearly included in the perianth

Plowers in axillary clusters—norths with small leaves and hyaline stip, es

P plebenim





P glabrum Wild Sr Pl 2 447 1799, FB? 5 34, in part, FLGP 3

45 Merr los en An erect or decumbent glabrous stout annual. Stems 60-150 cm pige Lo ves 75, 75 23 cm. tanceclate acuminate, glandular punctate. Ocreae was oute. Flowers, pink, in erect racences for n ing a terminal pariete. Perianth eglandular. Anthers reddish. Nutlets no rly orbicid r bico wex dark brown poushed

Civil in in marshes and along canal banks, often associated with

thei species of Potegonom and marshy grosses or seages

Local name . Nab Flowers and Fruits: Sept-March J. A. Misheshwart 550, near Jamuna Bridge

P hydropiper Unn subsp microcarpum Danser var leaticularia Danser in Be 1 Jard Bot Hoitenz (ser 3) 8 : 189 .927

P hydropiper Meissn in DC Prodr 14 109 1856, it part Hock f in FBJ 5 39, 1886, Gage in RBSI, 2: 401 & 425, .903: FUGP 3:37.

A giabrous, robust berb up to 1 m tall. Stems prostrate and rooting belew, with minute secretory glands. Leaves 6-12 - 1 5-2 5 cm., lanceoare or oblong lanceolate, tapering at ends, margins c.l ate. St pules giandular shortly chiate or cediate. Flowers pink, in slender, fluform, flexuous. 6-10 - 0-3 cm. racemes , bracts more or less distant. Nutlets opaque, granulate, shining

Common in marshes and along canal banks, often associated with other species of Polygonum and differs chiefly in its slender, flaform race. mes with somewhat distant bracts. The plant is known for the biting

taste of its leaves

Flowers and Fruits ; Oct -March J K Maheshwari 551, Hindan River: 622, Roshanara Gardens

P, barbatum Lian, subsp. gracile Danser in Bull Jard Bot Buitenz (set. 3) 8- 146, 1927

P. barbatum Hook f in FBI 5:37, 1886.

P serrulatum Hook f in FBI 5 . 38, 1886 (excl var dond), (non Lagasen nec. Meissn, nec. Miq ).

An erect, gahrous annual, 60-120 cm high, prostrate and rooting be, iw Leaves 5-15 × 3 5-5 cm. linear or elliptic oblong, acute or acuminate, margins chiate. Stipules strigosc, nerved with bristles on the margin as long as or shorter than the tube. Flowers white in short, stout, spiciform panieles. Bracts glabrous, with several, rough bristles from the top Perianth eglandular Nutlets trigonous, polished

Common in marshy places, along canal banks and in temporar ly wet ground near gardens, along roadsides, etc. Goats cat this plant



#### POLYGONACEAE

Local name : Mirchi; Jalbahar, Ban bhaoch Flowers and Froms Aug May J. K. Maheshwari 300, pond in Rosbanara Gardens

P. fagopyrum I. on Sp. Pt. 364 (753 Santapara in RBSI 1601) 254 (953)

A glaberus, much branched understrub 30-100 cm tal. Leaves 4-8 - 3.5.5 cm. that is dar-exate cordate. Figures with sharp angles and flat sides.

Cultivated for its grain

English name: Buckwheat
Flowers and Fruits: Cold senson
J. K. Maheshwari 3.

#### Rumex Lian

R. dentutus Lan Mart 2 226, 1771, FBI 5 59, FUGP 3 41

An erect, deep-rooted, glabrous annual 30-100 cm high Roots red coloured. Stems ribbed. Radical leaves much longer than causine ones. 10-15 × 3-7 cm oblong, obtuse rounded or cordate. Flowers green bisexual, in leafy or leafless, verticulate clusters. Perianth 5 × 3 mm, biseriate, inner segments tubercled on the back, the teeth much colarged in fruit turning to brownish-red. Notlets acutely ingonous, brown.

Common and sometimes abundant near canal banks, in fruit orchards

and similar moist situations.

Local name, Lalbibi, Jangli chorai, Jangli palak, Khat palak Flowers and Fruits: Jan.-Jone J. K. Maheshwari 601, Najafgarh

#### Antigonon Endl

A. leptopus Hock & Arn. Bot Beech Voy 308, t 69, 1841, Baney Man Cult. Pl. 351; Bor & Raiz. 265.

A targe, handsome climbing shrub. Leaves ovate, veiny, acute to acuminate, glabrous. Flowers showy, pink or red, in copious raceines which terminate into tendrils. Perianth lobes petuloid, the 3 outer ones larger.

Native of S America Commonly planted in gardens, along trellises

and poles.

English name : Coral creeper

Flowers: Cold season J. K. Maheshwari 364

## 88. Aristolochiacene

Aristolochia Linn

A berb, plants wild A bruitenta A climbing shrub, plants cultivated A ciegany A bracteata Reiz Obs 5 19 1798 FBf 5 75 F1 GP 3

on I Jour Agric Sci 15(6) 302 1945.

44 Singh n A phibrons, prostrate berb Lenves 4.6 15.45 cm glade 3 rent in or broad state deep cordate, basal lobes rounded browers so from eark purple soldary, tubular with trumpet-shaped mouth Capactes oblong elopsoid ribbed, 2.5 - f.5 cm

Ra e. It is an extremely buter plant and is used as an anthelmin in

Local name | K ramar

Flowers Greater part of the year

J. K. Maheshwari 505

A. elegens Mast in Gard Chron 2 301 1885, Merr Enum 2 Bailey up cat 346 Bor & Rair 26, f 22

A giabrous climbing shrub. Leaves broadly conform cordate, obtase of rounded long petrolate basal lobes rounded. Flowers blotched with dark purple or violet-brown, white outside solitary Perianth tube elongated yellowish green, limb nearly circular

Native of tropical America. Grown as an ornamental cumber along

the relases forming a dense screen with its forage.

Flowers : Oct.-Dec. J K Maheshwari 1448

# 89. Protencene

Grevillea R. Br nom cons.

G. robusta A. Cann to R. Br. Prot. Nov. 24, 1830, Parker, For FJ 430,

A softy robust, oakaceous tree with hoary or rusty-fomentose, young branches Leaves fern-tike, bipinnate or sometimes tripinnate, pinnae entire or deeply pinnatifid, ianceolate. Flowers greenish-yellow mixed with orange, in secund, one-sided, showy raceines. Ovaries stipitate, style long lateral Fruit an oblique, corraceous, 16 · 1 cm follicle,

Native of Queensland and New South Wales. Planted in lawns, shrucheries, hedges, gardens and along roadsides. Grows favourably in the crimate of Delhi and attains a good height

English name . Suk-oak Flowers: March-April Fruits: May-July J. K. Maheshwar, 651, University Compound



# 90. Loranthaceae

# Dendrophthoe Mart

A much branched stoot early partial parasite. Leaves, provide colored matthers, variable to those & 12, 2.56 cm, bratte 6 to orange 50, 4 mm, crowded in short resemes on leafless nodes, bractenic sharens exserted. Sigmus knob shaped, Fruits ovord-oblong, black

Met during the cold season on the Ridge and also in gardens. The riors common hosts are Acada leucophioea Willé. Ehrena toeris Rexb. and Dathergia sisson Roxb., also seen sometimes on Fous benghalensis. Linn., and F. religiosa. Linn.

Local name Banda Flowers Nov-Jan Fruits · Feb.-April J K Mahes (war: 782 Old Delh) Ridge

# 91. Euphorbiaceae

Flowers in cyath a, i.e. reduced to single stamens enclosed in an involuce with a single, central female flower the whole resembling a single flower Luphorbia.

Flowers not in evathia, not reduced to single stamens or a single ovary contained in an involucre:

Cells of overy 1-ovuled, juice sometimes milky

Petals present in one or both sexes, or if absent, calve petaloid

Leaves parmately lobed or pandumform

Leaves not palmately lobed

Jatropha

Erect or prostrate, whitish or purple-tanged herbs, seeds non-strophiolate Chrozophora Erect, woody, green herbs; male flowers white, seeds with a white, spongy cap Croton

Petals absent in both sexes

Stamens many; capsules prickly; shrubs or small trees

Stemens fews consules not perchip:

Stamens few; capsules not prickly:

Erect herbs or shruhs; leaves eglandular at base.

Trees; leaves 2-glandular at base . . . . . Saplum

Ceds of ovary 2-avoled, Juice very rarely milky Sivie arms much dilated, fruit an indehiscent drupe

Patrantiva

s yes and sivil arms sleeder Maje the week with a large 2 to 1 fed pinh into dioce a mishrahij Securentry

Piera ale absent in males Discipline it either sex combined with the callyx to hear Melanthesa shrubs or small trees. Disc present in the temate and often in the male flowers

herbs, shrubs or trees . . Phyllanthus Fruit a dry capsule, herbs . . . Fruit a berry

Shrubs; fruit small, fleshy, dark purple

Raganeug

Trees: fruit large, fleshy, pale yellow . . Emblica

# Euphorbia Linn.

Plants armed with stepular spines \* Woody, small shrubs, flowers erimson . . . . . E. milu Erect shrubs or trees; flowers yellowish . . . . . E. nerlifolia Plants anarmed :

Indivescence with builtant, scarlet, bracteal leaves, a garden shrub . . . . . E. pulcherrima 

Bracis green or pale

Involucres with a single, large gland, an introduced, erect herb 

Glands of involucre not large, erect or prostrate, small herbs Freet herbs leaves afternate to opposite, involucre glands 2 homed. E. dracunculoides

Prostrate or ascending herbs, leaves all opposite; involucie glands not 2-horned a

Leaves 1 2 4 cm long, prostrate or ascending herbs . Involucre glands bordered by a conspicuous, rounded amb, glabrous or puberulous herbs .

. . . . . . . E. hypericifolia involucre glands with very small or obsolete limb; hispid-hairy herbs . . . . . E. hirta

Leaves less than 12 cm long, prostrate herbs :

Capsules glabrous, plants glabrous . E clarkeana Capsules pubescent or birsute; stems hairy or hispid-

Capsules hady only along the keels

· · · . E. prostrata



Capsules pubescent or himste throughout Leaves crenulate, captules pubescent send Leaves en capaules hirsute, seeds parted

E. milli Ch.-dos-Moulins in Bull Hist Not Soc Line Borney 27 30 Pt 1826, Cre za in Jour Anii Arb. 21 306 1946 F. spiemeen. Buy ex Fleck in But. May 1, 2003, 1809.

A sime pruch branched somewhat climbing there has be every 90-30 cm hing armed with needle like spines. I caves harre all raind the seem fast cled, 3.5 - 2 > 7 cm spathulate or obova e finere shows, erro son to long pedantled dichotomous cythes each evan an subtended by 2 nem sphere, caspidate bright red bracts

Grown as an ornamental on rockeries in gardens and in heages along with other caphorinas and cacts

Flowers ! Major part of the year J K Maheshwari 1002

C. neriifolia L no Sp Pi 451, 1753, FUGP 3 . 76

An erect, succulent shrub or small tree. Branches terete, with 5. more or less spirally twisted ribs. Twin spines sharp persistent, divergent from a tubercled base. Involucres ternate, yellowish, the lateral ones pedicelled and bisexual, the central flower usually male and sessile Glands transversely oblong, yellow.

Often planted as a field and boundary fence and as curios on rockeries in gardens and verandahs in front of shops. The latex is used in footh

troubles

Local name : Thor Flowers: March-May J K Maneshwam 1132

E, pulcherrima Willid ex K otz in Otto & Dietr Allgem Gartenz 2 27, 1834, Merr. Foum, 2; 463

Po nsettia pidcherrima R. Grah in Edinb N. Ph.1. Jour 20 412 1836; Bor & Raiz, 171, Pl. 60, 61.

An erect or diffuse, garden shrub. Leaves ovare-eluptic to lancee a c long-petiolate, bracteal caves raved, bright vermilion-red or crimsonscarlet. Cyathia in cymes. Involucies bearing a large, ve i w gland on one side.

Native of Mexico - It is the Poinsettia of local gardeners and flerists

commonly planted in the hedges and shrubberies of gardens

English name : Poinsettra Flowers: Cold season J K. Maheshwari 785



E. geniculate Or og New Rat Pt Matr 18 1797 Fl Cell 3 83 An erect or ascending stout fistular annual, up to 120 cm tot Leaves alt enote bele a opposite above 3.15 S.R.cm var able nahape meeter is eliptic charge to eliptic harry and who she herea h the rate makes green remainds the apex and white near the base. Involving down to ge 5 shed with one comspicuous la eral giar a Capeacs probable as second to metimes 2 or led

A great ned weed from copiese Ame on Found in garder bees a homer armomenta becha or transf. sandy so he if a rice up onoping to the nursery hear of the University Leardens. A so met on

recently disturbed sould near gardens

Flowers and Fruits May-Dec J K. Maheshwari 367

E. depenneuloides Lamk, Encycl. 2 : 428, 1788; FBI, 5 : 262, FLOR

As erect smooth dichotomously branched deep-rooted herb Branches many leafy Leaves 3.5.5 0 3-0 4 cm linear to near-lanceoe alterna e to opposite 2-J ai esch node ... Involucres near y sessile, or tury glabrous, tobes emolate grands moon shaped Flowers pale ve low Capsules glabrous, about 5 - 4 mm. Seeds ellepsoid, stroph olate.

Common in cult vated and fallow fields on sandy and clayey, dry

soils. I sed as fedder

Local name . Jasehi Flowers and Fruits . April-Aug J K. Maheshwari 810

E. hypericadolia Linn Sp. Pt 454, 1753, FBJ 5 \* 249, FUGP 3 80.

An erect or decumbent glabrous annual, 15-60 cm. long Branches often purplish Leaves all opposite, very variable in shape, linear-oblong to et aptre-ovate often serrutate. Involucres constered, green, bordered by a conspictious, while or pink limb, glands petaloid, pink Capsu espubascent, bent, Seeds 4-angled, ellipsoid.

A common weed in fields, lawns and along canal banks on moist or

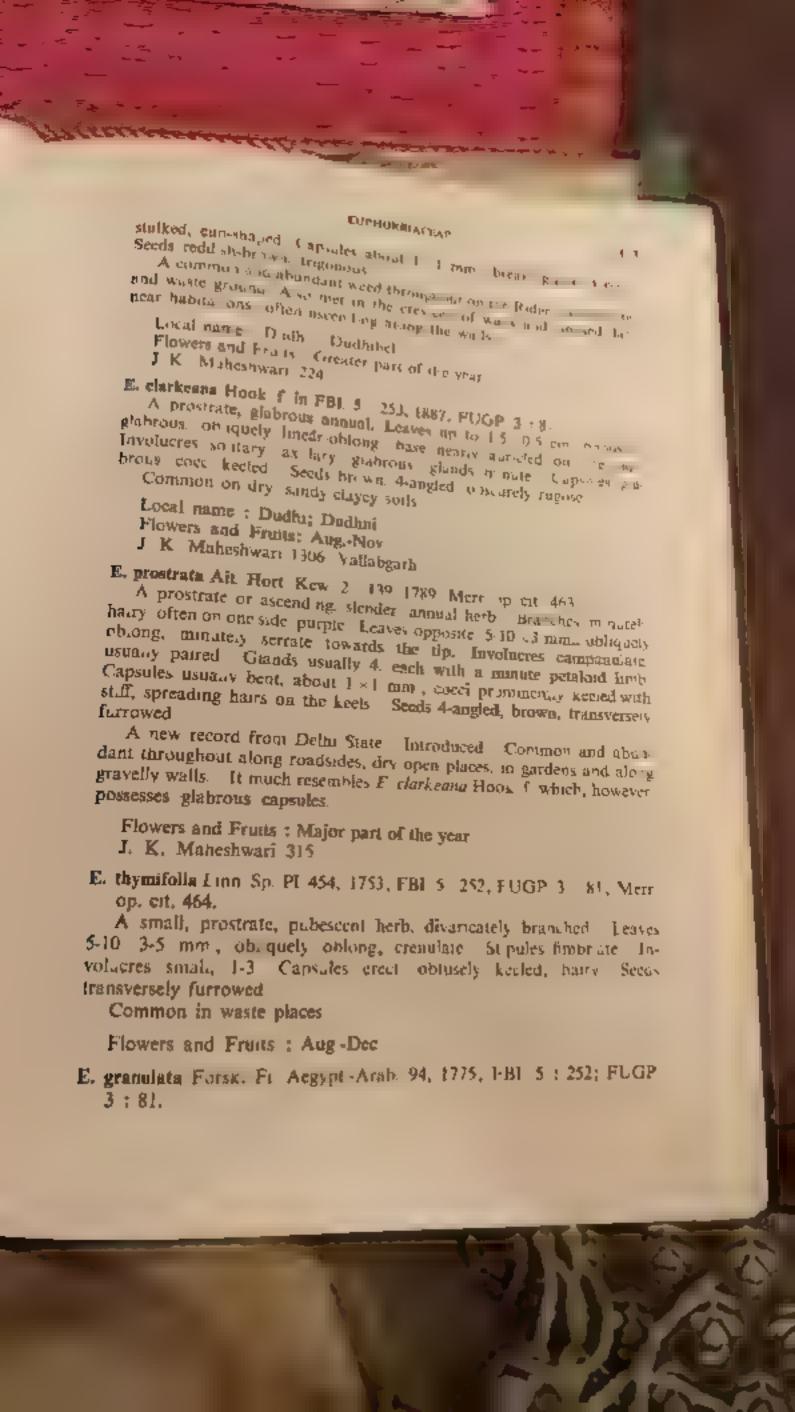
dry, sandy soil; often mixed with grasses.

Flowers and Fruits : May-Oct. J K Maheshwari 39

E. hirto L on Sp. Pl. 454, 1753, FUGP 3 80; Merr. Enum. 2 . 462 E. pilulifera auct. (non Linn.)

An annual, prostrate or ascending hispid herb, branching from the te otstock. Leaves dark green or reddish above, white-villous' beneath, 2.5-4 × 1.5-2 cm, eaptic or ovate-oblong with oblique bases Cyathia axinary and terminal, clustered in dense, crowded cymes. Involucres





A small prostrate, hispid-hairy berb, greenish or purplish in appearance Leaves prominently obtique at base, opposite, entire, vious, 5-8-3-5 nm. Chaoss usually with a small petaloid limb Capsules historic not keeled, about 1-1 mm. Seeds brown, 4 angular Complination on dry, velowish, sandy soils of fadow the ds and a stingar the hilly tracts of Gurgaon district and Mehrauli.

Figures and brin's Leb Aug.

J. R. Mabes (war 82) hear Carakul (Faridabad), 1,55, Mehrautt

## Jatrophu Linn

Leaves palmate's tobed young parts, perioles, etc. clothed with glandular bristies. J. gossypifotia Leaves pandar form, plants aca-bristly. J. pandaraefolia.

J geogrifolia Linn Sp. Pi. 1006, 1753, Parker, For Fl. 461; Merr Engin. 2, 449, Bor & Ra z, 175, f. 108, Pl. 64

A much-branched shrub. Stems grev white to ash coloured, with brown tenticets throughout. Young parts pale or deep purple. Penoles, leaf margins and young parts with numerous, fascicled and branched, grandular bristles. Leaves 3 to 5-deeply lobed. Flowers purplish-red-dish, monoccious. Capsales oblong, 3-lobed, brownish.

Uncommon Introduced from Brazil, has become naturalized on the

R dge Also planted in the hedges around gardens.

Flowers and Fruits: July-Sept

J. K. Maheshwari 221; 1186, New Delhi Ridge

J. panduraefolia Andr. Hot. Rep. 4 t 267, 1799, Hames, Bot. B.h. & Or

J hastata Jacq. Enum. Pl. Carrb. 32, 1760.

An erect, pretty, branched, small shrub. Leaves panduriform, distantly dentate below, abruptly accuminate. Flowers bright crimson, Nature of Cirks.

Native of Cuba Grown in gardens for ornament.

Flowers: Summer and rainy seasons J. K. Maheshwari 36!

Chrozophora Juss. corr Benth & Hook f. nom. cons

Erect herbs, ovaries and capsules ciothed with stellate tomentum and Prostrate herbs, ovaries and served.

C. verboscifates

Prostrate herbs, overies and capsules clothed with stellate tomentum only;

Leaves about as long as broad, eglandum at the base.

C. prostrata



Leaves songer than broad, 2-glandoler at the base

C. verbascifolia A. Juss. Fuph. Tent. 28, 1824. Spreng. Sp. 1, 85, 327.

Leaves 4 5 7, 1.5 cm, a safe since a ways. Flower is at their race per major see wided above female be sw. Major R. we will present from Seeds black, we third with stellare hairs and severy a sie. R.

A new record from Deffit State—Duth e in F1 GP 3 1 Secondtests species from Mathura arone—Occurs near Hauz khas on way to Medical a and in the neighbourhood of Najalgarh on sandy loan son The plant gives a characteristic dull blotshowlife appearance from a

Flowers and Fruits - May-Oct J. K. Maheshwari 335, 725

C. prostrata Delz. in Datz & Gibs Romb F) 233 861, Ft GP 3 436 C plicata forms 3 Hook f in FBI 5 410, 1887

A prostrate or procumbent stellate-woodly both with many branches from the root. Leaves nearly as long as broad often cark purplish brown eglandular at the base. Flowers unisexual, in few-flowered without suvery scales. Stamens 15 in 7 whorks. Capsules see ale-woodly.

Common in dried up ditches and canals, often forming a feat on the clayey ground.

Flowers and Fruits. May-June

C. parvifolia Klotz ex Schwith, Pl. Nelet, 11, 1862, Pram in Kew Bu. 91, 1918

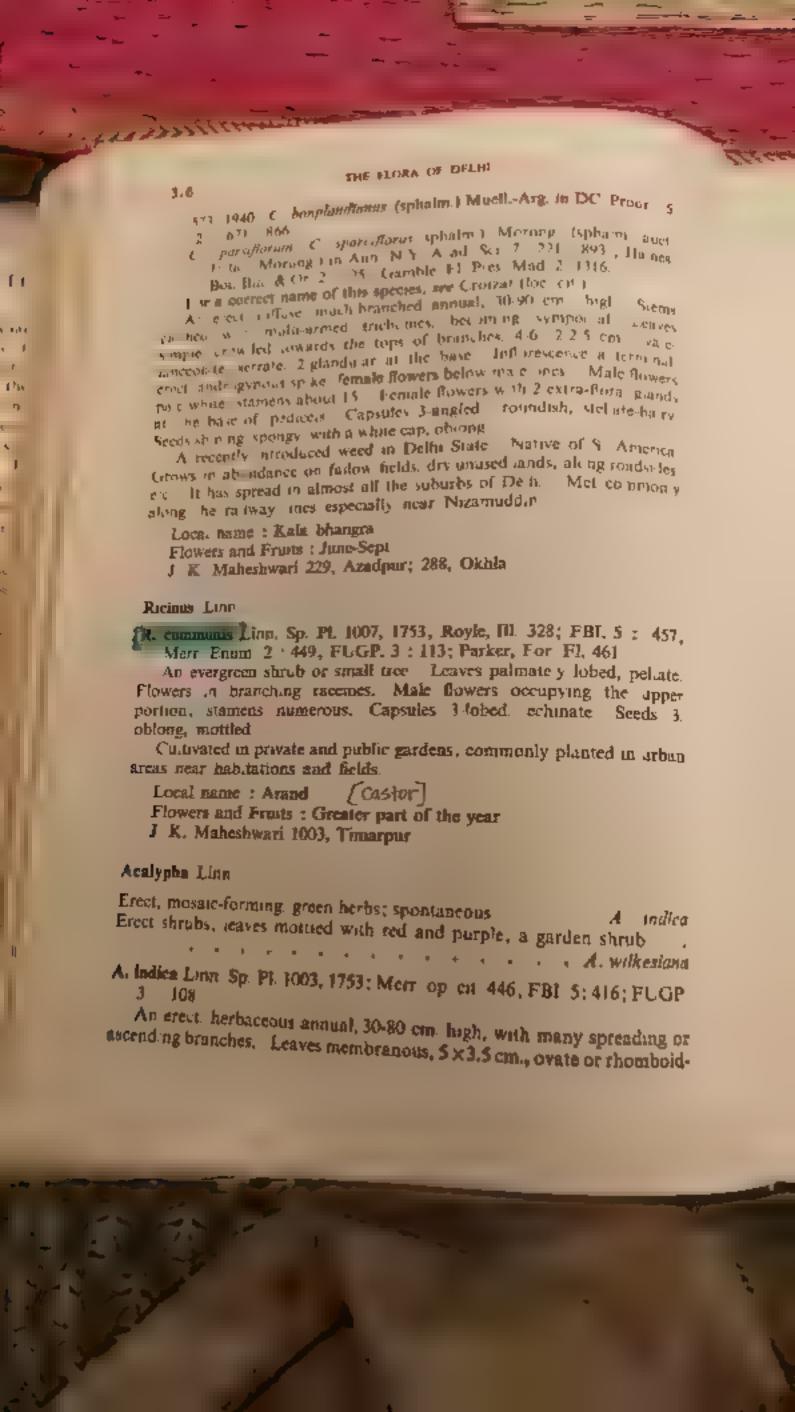
A prostrate, spreading or ascending, stedate-woolly, deep-rooted herb. Branches many often tinged toward reddish. Leaves 2.5-5 × 2-4 cm., 2-glandular at base, often dark purplish-brown above and irregular in shape, veins impressed above. Flowers in short, axiliary racemes Male flowers vermilion-coloured. Anthers yellow. Capsules stellate-woolly without slivery scales, 6 × 5 mm. Seeds convex outside.

Grows in dried ditches and canals, common in the dried up botto n of Najafgath Drain on clayey soil, associated with Heliotropium supmum Linn., and Coldenia procumbens Linn.

Flowers and Fruits: May-June J K. Maheshwari 677

Croton Linn.

C. bonplandfanum Ba., I in Adans 4 : 339, 1864, Croizat in JBNHS 41



ovu e crenz'e terrate concole at have derapped in a most eno nate green, o lat creet at Harr of her males usered towards he non-females soft any or parent each enclosed by a fining 5 5 men brack Capsules a recorded by periodent brach Scedi we

t ommon as a garden weed on the shades of trees and shrube; the I. He is waste places near gardens and in cultivated fields

Flowers and Pruits : Sept «June J. R. Maheshwari 79

A. wilkestone Muell-Arg. in Dt. Prode 15, 817, 4866. Mere to, co. 4. triculor Seem, Fl. Vit 225 1867

A garden shrub. Leaves usually broad cordate short acumona e cremate, variously monthed with shades of red and purple. Spikes stender 20 cm or more in tength, in fascinating, drouping feations. Figwers

A common garden favoursie, planted for hedges and fences around gardens and parks. Varieties murginato W. Mider, and macrophytta N. Taylor, are also grown in summar places.

Flowers: Jan,-July J. K., Maheshwari 206, Qudsus Gardens

# Saplom P. Browne

# sebiferum (Michx.) Roxh. Ft. Ind 3 693, 3832, FB1 5 470, Ft GP 3 116; Parker, For. Fl. 458.

Stillingia sebifera Michx Fl. Bor. Amer 2 . 213, 1803, Royle 11

Excorcaria sebifera Muelli-Arg. in DC Prodr 15(2) 2.0, 1866 Brandis, For Fl. 441

A small deciduous tree with a dense crown of foliage branching above Bark grey, longitudinally grooved. Leaves 45-7 - 4-65 cm. broad rhomboid, acuminate; base delioid

Native of China Planted in lawns, parks and gardens. A number of trees occur in Sabzimandi Gardens. The iter bears a sink na resembiance to Dalbergia sissoo Roxb in its foliage and can be easily postaken for the latter when in a vegetative condition.

English name: Chinese tallow-tree 1 K Maheshwari 1119, Rashtrapati Bhavan Compound

# Putranjira Wall.

Proxburghii Wall Tent Fi Napal 61, 1826, Royle, Il. 347, t. 83 bis Brandis, For Fl 451, t 53 , FBI 5 , 336, FUGP 3 , 99

A monerate-a red or large evergreen tree Branches drooping area es chiquety eleptic obling to ovare corraceous. I sweets no sexual versus. Maid flowers in derive as fary clusters. I emale flowers it is provided by the bedges shrubberies and lawns of gardens.

2001

gro

VC

self sown your g manis are often met in waste places near gardens

Local name Pitranna Mare and femule flowers . April-Aug. Fruits . Winter and summer

J. K. Maheshwari 201 1247

Securinega Jusa, nom. cous-

Financial leaves 2.5.7.5 cm long

Branch ensigned in spines leaves usually not exceeding 2.5 cm

S. Pleosopyrus

S. virous (Roch et Weid) Pax & Hoffm in Erg) & Prontl. Nat Pfam ed 2) 90 60 1934 Santapau in RBSI 16(1) 275 1953

Phr lanthus virosus Rosb ex Willd Sp Pf 4 578, 1805

Fluegges microcarpa Bl. Bijde 580, 1826; FBI 5 : 328

An creet multi-branched, dioectous, unarmed shrub. Branches require subborizontal or ascending. Leaves 3.5-5.5 × 2-3 cm., variable in shape usually obovate, otherwise elaptic, elliptic-ovate or obcordate, glasses is beneath. Flowers minute, greenish yellow, in axiliary clusters, the males numerous stamens 5. caserted females 1.5 or more. Fruits globose, of 2 sizes, white, fleshy. Seeds 3-6, punctate.

Occurs on the Ridge, planted in hedges and near canal banks. Some shrubs planted in Roshanara Gardens appear to be quite different than

those found on the Ridge

Maie flowers: June-Aug. J. K. Maheshwari 94; 1118

5. leucopyrus W lld.) Muell Arg. in DC Prodr. 15(2) 451, 1866, Pax & Hoffir in Engl. & Prantl, Nat. Pfam. (ed. 2) 19C : 60., Santapau in RBSI, 16(1) 7 275, 1953

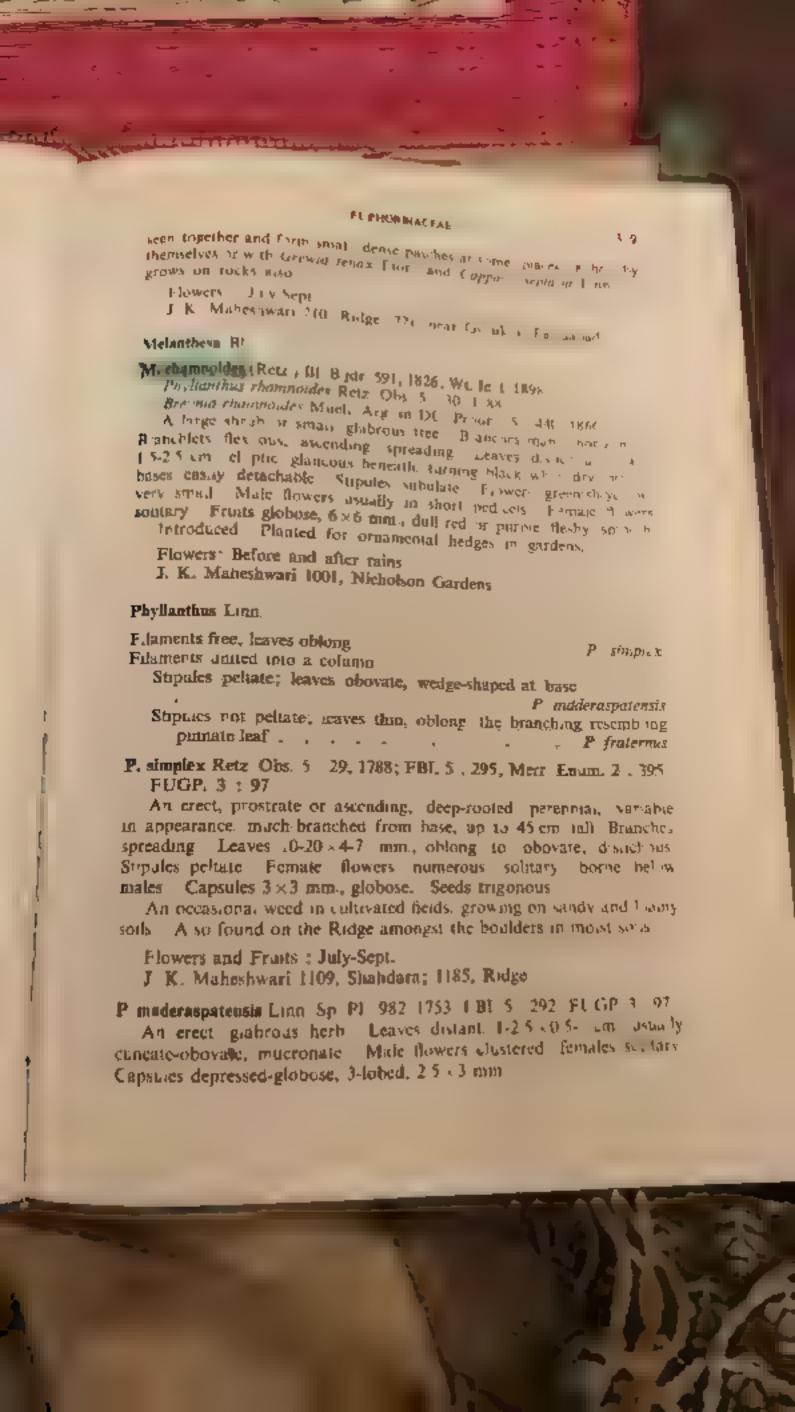
Flueggea (Fluggea) leucopyrus Willd. Sp. Pl. 4 757, 1806, FBI 5

Phythanthus leucopyrus Koen ex Roxb. Hort Beng, 69, 1814, nom-

A large, woody, much-branched, diffuse shrub. Branches white; branchiets spine-like purposh when young Leaves less than 25 cm obovate couplic or obcordate, glaucous. Male flowers greenish-

Faridabad, in depressed areas The male and female plants are often





Lor

i Di

fier

wh

Ė

320

Rare

Local name : Hazarmani Flowers and Fruits : Sept -Oct J. K. Maheshwari 770, Shahdara

P. fraternus Webster in Contr. Gray Herb. No. 176, 53, 1955

P niruri Hook F (non Line.)

An erect glubre is, shallow rooted annual 30-60 cm. high, often be aw it on Branches spreading. Leaves simple appear to be computed 0.7-44 mm obtong dis chous often overlapping. Howers yet, ash avallary, hanging cown below the branchlets, males 1-3, females sortary. Capsules depressed-globose, smooth. Seeds trigonous, pale brown, longitudinally ribbed.

A common weed of gardens and cultivated fields during the rainy season. Also found on the R dge as a herbaceous undergrowth and n

the crevices of stones

Local name; Dhadhan; Mokh, Nunkr Flowers and Frants; Jane-Oct. J. K. Maheshwari 125

## kitganelia Juss

K, reticulate (Pour ) Baul Étud Gen. Euph. 613, 1858; Halnes, Bot. Bib. & Or. 129.

Phylianthus reticulatus Poir in Lamk. Encycl. 5 · 298, 1804, FBI 5 · 288, FUGP 3 · 95.

A large diffuse or straggling, glabrous shrub. Branchlets drooping. Bark thin greyish brown. Leaves 2-4 × 1-2 cm., oblong, elliptic or rotundare, glabrous. Male flowers purplish, in fascicles, disk glands pale veilow, stamens 5. Female flowers solitary, ovaries 5 to 10-celled. Berries globose. I × 6 mm., dark purple. smooth. Seeds 10 or less, trigonous, crustaceous, punctate, shining.

Introduced, grown in the hedges of garden shrubberies, fruit orchards, etc. Often spontaneous along irrigation channels. It forms an effect we hedge along with Capparis veptaria Lian., and other shrubs. Used medicipally

Local name: Neclbari; Marki Flowers and Froits: April-July J. K. Maheshwari 180, Roshanara Gardens

Emblica Gaertn.

RBS1 16(1) 277, 1983 in Ph. Hanthus emblica Linn Sp. Pl. 982, 1753; FBI. 5: 289.

A moderate-s zed or large, deciduous tree Bark neeling off in flakes Leaves distinheur, resembling prinate leaves 12-18 - 3-4 mm narrowy I near Plowers yellow in Axiliary fuscions on lower leaves. Fruits

No ive of tropical As a Cultivated to the fruit orchards for its fruit which are packled, a so planted in public parks, lawns and squares

Ama, Aoshla, Aola Flowers ' Murch-May, Fruits - Cold sext in J K Maheshwari . 190, Safdarjang Fomb

## 92. Ulntucene

F owers clustered, appearing before the leaves fruit a samura

Flowers appearing on young, leafy shoots; fruit a dsupe . · · · Holoptelea

Holoptelea Planch.

H. integrifolia (Roxb.) Planch, in Ann. Sc. Nat (s+r 3) 10 259, 1848, FBI 5 481; Wt. Io. t. 1968, Parker, For F 466. Ulmus integrifolia Roxb. Pl Cor. 1:56, t. 78, 1798, Stewart, Pun;

A small or medium-sized, deciduous tree Bark grey Leaves 10-15 x 5-7 cm., broad evoid or evate, acuminate, subconnecous. Flowers green, in numerous fascicles on the leafless branches Saratras obliqueelliptic to suborbicular, about 2.5×2 cm, notched at the apex, wing

Some trees occur on the Ridge near Lover's Lane, New Deln. and near Qutab Also planted in gardens. The tree is leadless when fruiting Stewart (loc cit ) reports that the bransed leaves are applied to boils

Local name : Papri

Fruits : May

J. K. Maheshwari 1191, Lodi Gardens

#### Celtis Linn

C. australia Linn Sp Pl. 1043, 1753, Brandis, For Fl 428, t 50 & Ind. Tr 595, FBI 5:482; FUGP. 3:121; Parker, For Fl. 467.

A medrum-sized, deciduous tree Bark grey. Trunk more or less cylindrical Leaves 6-8 x 3-4 cm, obliquely ovate or elliptic, acuminate, entire of crenate-serrate, corraceous; juvenile ones soft. Flowers pale yellow, polygamous, apetalous; male and androgynous cymes usually At the base of the shoots, in lateral fascicles and short racemes; the females in the upper axils. Sepals with woolly margins, light purplish-tinged Stamens 4, erect Ovaries woolly, stigmas 2, large. Drupes ellipsoid or ovoid, rugose.

I meets crowded in globase heads or on or anode fleshly receptation stamens straight in bad.

I towers crowded on the outside of ablong of irregularly globase discreptation.

Flowers attached to the mast walls of a closed receptation.

Flowers not crowded on or inside large, fleshly receptable, but in apikes or beaus stamens offered in bud with reversed anthers.

Flowers in datams or the female flowers subcapitate, perianth fleshly in fruit.

Morus Male flowers in heads or spikes females solitary or 2-4 per anish not fleshly in fruit.

Strehlus

Fleux

Leave

Leave R

Artocarpus L. R. & G. Forst nom. cons

Liskooche Roxb. Ft. Ind. 3: 524, 1832, Royle, III. 337, Brandis, For Ft. 426 & Ind. In 612, FBI 5 543: FUGP 3 141: Parker, For Fl. 484

An erect or bent, large, decidaous tree with a spreading crown—Bark fissured, dan black—Leaves large, 20-25 × 10-15 cm., elliptic, obovate or oblong scabrous, entire or denticulate, supules cadacous—Flowers in axiliary, glabrous, short-stalked heads—Male receptaries orange-yellow flowers monandrous—Fruit clusters lobulate, nearly smooth, veilow when mpe—Achenes embedded in a fleshy receptacle

Commonly cultivated in the Sahzimandi and Sarai Robilla fruit crehards for its edible fruits used either raw, cooked or as pickle

Local name ; Barbal Flowers and Fruits : April-June J. K. Mabeshwari 1420, Gulab Bagh

A integrifolius auct. (non Linn f.)

A. Integra auct. (non Merr ).

A fairly large, evergreen tree Leaves elliptic to obovate, coriaceous,

10-20 × 10-13 cm. Superer surge cadaco a Male heads overd females cylindric, tubercles and very large a ma or ty, nanging on the trunk and and branches. Seeds read win. Cultivated to the frust archards and elsewhere for the cake of tell hit. large fruits

Local name: Kathat Flowers and Fruits . May-June J. K. Maheshwari 1417, Gulab Bogh

## Flow Line

Leaves oupphiform . Leaves not cope iform, but broad ovate, elliptic, lanceulate to obovate

Leaves tomentose or pubescent beneath, at least when young Leaves obtuse; receptacles globose, puberalous, red when Leaves shortly, abruptly acuminate; receptacles oblong to

subovate, nearly glabrous, orange resi when ripe . . . Leaves glabrous. . F. drupacea vas. pubescens

Lateral and secondary nerves close, fine and parallel; recep-

Receptacles bright orange yellow, lateral basal nerves of leaf spreading parallel to the secondary nerve

- F. benjamina vat comosa Receptacles whatish or purplish; lateral basal nerves obaque . , . . Lateral nerves not close and parallel. F m.crocarpa

I caves acute or shortly, bluntly cuspidate Leaves acuminate or caudate: F tsiela

Leaves broad ovate or ovate-round:

Leaves terrainating at the apex in a slender tail about half the length of the blade F religiosa Leaves not caudate, but narrowed at the apex into a cusp about one fourth the length of the bade

. . . . . . . . . . . F. rumphit Leaves ovate-oblong, efliptic or ovate, abruptly acumi-. . . F. virens var. sublanceolata

Receptacles stalked;

Receptacles in clusters on short, special branches F giomerata Receptacles solitary or paired

Med.am-sized or large trees, leaves ovate or oblongovate, receptacles whitish, tinged red and dotted . . F virens var. virens Woody thrubs or small frees; leaves orbicular-overs en re or 3 to 5-lobed receptacles yellow or yellow 45 purple when ripe Leaves usually broad or orbicular ovato, sometimes lobed, branchiets tomentose . . . . P palmata Leaves generally lobed, branchiets pubescent or . .

T Refilmate C DC in Bot Mag t 8092, 4906 . Benthala Frees Cale

A small or medium vized tree, much branched above, the ground Bark of white loupk with distant, horizontal wrink es. Leaves convisions song-peticled, green above pase vellow beneath prominently nerved Receptacles 15×14 cm

Planted in gardens, lawns and squares

English mame: Krishma's buttercup J. K. Maheshwari 1133

F benghalensis Linn. Sp. Pl. 1059, 1753; Brandis, For, Fl. 412 & Ind Tr 600 FBI 5 499 , FUGP 3 147 , Santapau in RBSI 161 , 289, 1953.

F indica Linn Sp PI 1060, 1753 emend. Lamk Encycl 2 494. (788 (non King, 1887)

A sarge evergreen tree, extending laterally by sending down aeria roots from the branches. Leaves 12-15 x 10-12 cm., ovate, orbicularovate to chiptic corraccous, entire. Receptacles axillary, sessile, paired, globose, red

Commonly planted along roadsides, in lawns and gardens. Young seedlings are often met in the crevices of the boundary walls of bungalows

Local name: Bargad, Barh; Barota Flowers; June-Sept J. K. Maheshwart 178

Corner in Gdns Bull Singapore 17 381, 1960.

F mysorensis var puhescens Roth in Roem & Schult. Syst 1, 508,

F my sorensis Heyne ex Roth Nov Pl. Sp. 390, 1821, FBI 5 · 500 A handsome, shady tree with few serial roots. Leaves 15-20 - 9-11 em ovate to ovate-e-liptic, shortly abrupily acuminate, prominently nerved beneath. Receptacies sessile, in axillary pairs, 22-18 cm chlong to subovate nearly glabrous, orange-red when tipe

Planted in public gardens and lawns.

P brojamina Care Var comosa King, Sp. Fic 44, 1887; Bailey, Stand



P comosa Rosh, Pt Cor 2 14 1 125, 1799

A large, there geen somewhat tree with a splatting or we and drooping orthodies. Leaves 6.2.25. 25-6.2 cm, contactour, smooth shirtly ellow vate abra, is acuminate, obliquely pointed, entire Rece, acles assaury, somethy or paired sessile, orange-yellow when the male, female and gail flowers in the same receptacle. Achenes avoid for there

A graceful, evergreen tree, planted in gardens, haves and squares. The receptacles become attractive at maturity

Receptables Oct

J K. Maheshwari 736, Lodi Gurdens

F. microcorpu Linn, f. Suppl. 442 1781; Corner in Gdas Bull Singapore 17: 397, 1960

F retuse auct (non Lmn.)

A arge or med uni-sized, evergreen, glabrous tree with a dense crown Bark dark grey. Leaves 7-9 ×3.5-5 cm, elliptic, ovate or obovate round ed or binitly academiate possibled glossy nerves not promined. Receivacles about 6-9 × 6-9 mm, sessile, paired depressed-globose, smooth vellowish-reddish, subtended by J., persistent braces.

Commonly planted along with F, virens An, vas virens, and F virens var subtanceolosa Corner as an avenue tree, along severa streets of New De at A so planted in lawns and gardens. It provides

an abundance of cool shade by its crown of dense foliage

Receptacies March-Oct.

J K. Maheshwari 532

F. tsiela Roxh Hort. Beng 66, 18.4, nom. aud & Fl. 1ad 3 549, 1832

King, op cit. 59, tt. 73, 84 , FBI 5 : 515

A glabrous, spreading tree (stunted in the area) without aerial roots. Bark smooth, greenish white Leaves corraceous, 10:14-65-8 cm., broad ovate entire, smooth, with a thickened, marginal nerve petioles one-third to half us long as the lamina. Receptacles crowned at the ends of branches, 13 × 10 mm., top-shaped, sessile, paired, smooth. Mare flowers sessile, gain flowers pediceitate. Fruits ovate-remiform

Planted in gardens, lawns and squares

Receptacles: Oct. J. K Maheshwari 737

Ic. t. 1967
A large or medium-sized glabrous tree Bark grey Branches



Receptacion show a per languated Receptacion sessio, par como a 10 v8 mm, depressed globase, dark purple when rise a party planted along the coads tentral parallel to a proper River. Also men in vilages near temples and as at a genue tree. It is not a receive that the party planted along the coads tentral parallel to a proper River. Also men in vilages near temples and as at a genue tree. It is not a receive for find in The insect for this begin in the part River of Received to provide the party of the part

Local name: Pipal Receptacies: April-June J. K. Maheshwari 179

Fromphilds Buds 437 (825 King Sp. Fig. 54 ( 62) | TB] | 5 | 512 | TB | 18. Ind | Tr. 60| & 717 | FUGP 3 | 151 | Suntapas | c | 201

F. ordelina Rest Fl. Ind. 3 548, 1832 (non B) B and 1 r

A small or medium-steed, deciduous tree. Bark smooth, grey Leaves grabrous, sharing, 10-15 • 8-10 cm, broad ovate, acom state Receptances sessile paired, axiliary, from old reaf scars, grobular, 15 • 14 mm, smooth, wh tish

Planted in lawns and gardens.

Receptacles: May-June

**glomerate** Roxb. Pl. Cor. 2 · 13, t. 123, 1799 & Fl. Ind. 3 · 558, Royle 111 · 337, Brandts, For, Fl. 422, t. 49 & Ind. Tr. 609 King Sp. Fic. 73, t. 218 A; FBF 5 · 535, FUGP, 3 · 160, Santapad in RBS1 16(a) · 293, 1953.

F. goolereea Roxb. Fl. Ind. 3: 538, 1832.

Covalha glomerata Miq in Hook Lond. Jour. Bot 7 465 .848 A small or medium-sized or large, deciduous tree. Bark smooth, dail white or reddish-brown. Trunk with distant horizontal lines, nearly circular. Leaves 10-15×6-7 cm., ovate, ovate-oblong to elliptic-tanceolate, glabrous, prominently nerved beneath. St.pales scarious ovate-tanceotate. Receptacles clustered, on short, leafless branchets. 24 25 cm., top-shaped to nearly globular, middless.

24 25 cm, top-shaped to nearly globular, reddish, with a sweet flavour Painted in gardens and vidages. The fruit is caten raw or cooked the leaves are much used as cattle fodder and frequently so d in the market. Platted along the Western Jamuna Canal, near village Bawana and along the Bodarpur-Mehrault Road.

Local name . Gular Rece tacies . April-July J. K. Maheshwari 16



resident Ait Hort. Kew 3 451 1789 - Corner to Come Butt Sangapor

F an onthe Wild seres Rosb Fl Ind. 3 55t, 1832; FBF 5 - 514 r a rate r o pacen

Var viceon

the sat limitertime King, Sp. Fic. 63, 1-76, 1887. FBI

le is a long shed chiefly by its peduneulate recentrales and comex harde gaves

A common avenue tree along several streets in New De b. A sened a perder laway and squares for shade

Local name Prikhan Receptacles: Sept -Dec

J K Maheshwari 531, Queensway Avenue

y - sublanceolata M q ) Corner in Gdos Bull Singapore 17 377 1960 F se soph la Bl var. sublanceolata Miq. in Ann. Mus Bot Lugd Bat 260. 1867

A targe or medium-sized, spreading, deciduous tree, quick-growing, Bark smooth, greenish grey. Leaves thinly connecous, glabous, 9-15 6.9 cm ovate to ovate-obiong, abruptly acuminate. I-nerved Recepac es sessie, axil ary, paired, pubescent, globose, whitish flushed with red, dotted when mpc

Planted as an avenue tree along the streets of New Delhi

Loca, name · Pilkhan Receptacles. Oct.-Dec

F palmata Forsk F! Aegypt -Arab 179, 1775; King, Sp. F.c. 146. t. W5 : FBI 5 . 530 ; Brandis, Ind. Tr 607, 718 ; FUGP. 3 : 158. F caricoides Roxb. Fl. Ind., 3, 529, 1832

F virgata Roxb op cit 530 , Royle, III. 337 Brandis, For Fl 419 An erect, woody shrub or small tree, similar to the cult vated fig. Bark dud grey. Young parts tomentose. Leaves 10-15 x 8-11 cm., orbicular or broad ovate, usually dentate or serrate, base 3-nerved Receptacles axil ary solitary, pubescent, about 2 × 1.5 cm., subglobose or pyriform, yellow.

( minor in hedges and along strigation channels passing through the fruit orchards. Also found in waste places near gardens, etc. The laser is said to be employed a preparation of curd

Local name Anjari, Kaimbar, Khat gulen, Patgalen Receptucies: Feb -July

J K Maliest wart 8, Roshanara Gardens, 527, 838, near Quiab

urica 1 in 1 Sp P 1059 1753 Parker For I'l 482, Merr Equin 47; Bailey, Man. Cult Pl. 339

196 .

A small tree or bush beenching from the base. Bark smooth, grey or duil white. Trunk with distant, horizontal wrinkles. Leaves about 20 18 cm broad evote to nearly projecular or 3 to 5-lebed, cordate, create service. Recep seles to tary or parced as thary about 25-22 on gothers or pear shaped yellowish-purple when it pe Native of Medderraneau Region Cultivated in gardens for the

O THE TON

cotal none Phakwada Anjir Receptacies Jan April Ripe Figs. June-Oct J. K. Maneshw ri 586. Kingsway Camp Gardens

F electice R vb Hort Beng 65, 1814, nom. nud. & Fl Ind 3 : 541 \$3. FBI 5 508 King, op cit 45, 1 54, Santapau in RBSI 6(1) 294, 1953.

A small or med um sized, glabrous, evergreen tree. Leaves 15-18 -18 5 cm. usually elliptic, deep glossy-green. Supules about half as long as iamina. Receptacles paired in old axils, sessile

Grown in its avenue state as a pot- or tub plant in gardens, green-

houses and living rooms

J K. Maheshwart 1436

Mores Linn

Leaves acute, styles short, free, glabrous or slightly hairy M alba Leaves long-acuminate, styles long, hairy, connate below. M indica

M. albe/Lum Sp. Pl 986, 1753; Rovie, Ill 336, Roxb Fl Ind 3 594, Brandis, For Fl 407, t. 47 & Ind. Tr. 612, FBI 5 492, Parker, For F1 473, FLGP, 3: 137; Merr Enum. 2: 36

A small or medium-sized, deciduous tree. Leaves broad ovate, denta e or lobed, cordate. Flowers monoectous. Male spikes catkinake, elongare Female spikes short, ovoid. Fruits white or dark purple, turning black when ripe, sweet,

Comvated in gardens, lawns and hedges, for its edible catkins. young leaves and flowers appear in February Leaves are used as fodder

Common on the Grand Trunk Road as a roadside tree

Local name: Toot

Flowers: Feb.-March. Fruits: May-June I K. Maheshwart 645; 968; 1015; 1230

M. Indies Line, Sp Pl. 986, 1753; Brandis For Fl 408 & Ind Tr 612 FBI 5 492 FUGP. 3 136.

A deciduous tree or large shrub Leaves ovate, coarsely serrate, 4-15 cm rong Male spikes lax. Female spikes short, evoid, Fruits dark purple at maturity.

Cu,uvated in gardens for its fruits.



329

Local name : Shehtut

Flowers and Proits : Feb.-May

Strehlus Lour

Tr 615; FBI 5 489; Mere Enum 2 18 T15 3 19

Troubles aspera Reta. Obs. 5: 30, 1788 (eacl. sya), Rock Fi feet

A triali, often grarled evergreen tree, up to 6 m. I gh and trialist shruh, branching from base. Bath whites Branches each cary pears to taphe or the about or obovate, acute or acammate ough

Rare; met in the hidy tracts near Gurukul Faridabad and along ranway trees, the flowers and fruits could not be obseved. Cours the this plant. Also used in skin diseases.

Local name . Choriya , Papar J. K. Maheshwaci 716 , 812

Broussonetin papyrifers Vent. Iabl. Regn. Vegét. 3 · 547, 1799 , Royle III 340 Brandis, For. Fl. 410 & Ind., Ir. 613 , t Bl. 5 , 490 FUGP 3 : 162.

A small, quick-growing, spreading tree Branchle's time nost Leaves rather sticky, 3-nerved, objiquely ovate or oblong, entire or lobed serrate. Flowers dioectous. Male spikes cylindric, pedancled Planted

Maie flowers : Feb.-April J. K. Maheshwari 1385

#### 94. Cannabinaceae (Cannabiaceae)

Cannabis Lunn

C. sativa L.nn. Sp. Pl. 1027, 1753; FBI. S. 487; FUGP 3: 124; Santapau in RBSI. 16(1): 295, 1953

A robust, herbateous or shrubby, smelling annual Leaves 3 to 8-foliolate, long-petioled, lobes lanceolate. Flowers dioecious. Male plants flowers in axillary short particled cymes. Female plants flowers crowded with leafy bracis. Style arms 2, filiform. Nuis crustaceous.

Common in waste grounds, along roadsides and in the undergrowth of first orchards near Sabzimands and Sarai Robilla, often becoming gregarious along the edges of fields and irrigation channels of gardens. The male plants are found more commonly than the female plants



Cosumina Line

C. equitoffalls (cm Amoen Acad 4 143 1759 (equivalents) PRI wax Merr Fram 2 | FUOP 1 162 Suntanna RBs1 (6(1) 295, 1953 C maricata Roxb Fl Ind 3 519, 1832

A narrow, tall, leafless, weak tree Branches drooping Branchlets very slender, rush-like, with whorls of 6-8 scales, similar to the twigs of Fau serum (hence the name equisetifolm). Male spikes evilindric 2.5 - 0.4 cm usually numerous at the ends of branches. Female flowers in globose or avoid 25 × 18 cm heads becoming cone-like. Natlets hin, Winged

Planted as an avenue tree along some streets, one can be seen behind If gh Transmitter Power Station, Coronation Memorial, Radio Co.ony Also planted in lawns and gardens. It is not suitable as an avenue tree

Local name; Vicayta jimu Flowers: Merch-May, Fruits: June-July J. K. Maheshwari 196

#### Salicaceae

Salix Linn

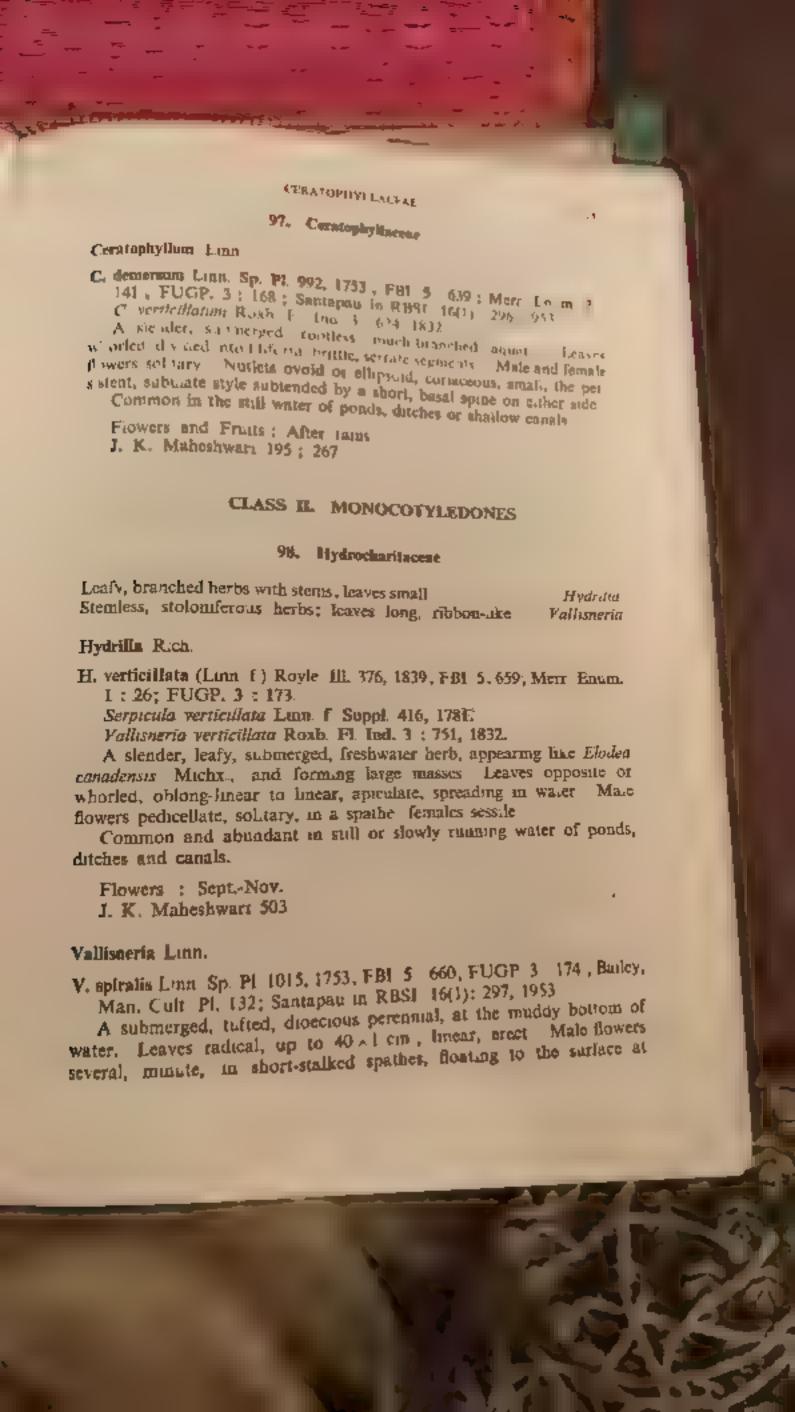
S. tetresperma Roxb Pl. Cor 1 66, t 97, 1798 & Fl Ind 3 573, 1832, Royle III 343, Brands For Fl 462, t 58 & Ind Tr 636, FBL 5 626, Merr Enum 2 . 22; FUGP 3 166, Santapan in RBSI 16(4, 296, 1953)

A large, much-branched, leafy shrub or small tree Bark rough Leaves 8-15 x 3.5-4.5 cm, avate-lanceolate to lanceolate, glaucous beneath, serrulate. Flowers after the leaves. Male catkins \$-10 x 1-1 5 cm., yellow, scented

Common along the banks of Okhla and Hindan Canals, probably planted. The male plants are propagated by cuttings which possess dorment buds. Female plants are found near Aligarh but not in Delhi:

Maje flowers: Nov-March J K Maheshwari 552





unifiests. Female flowers soldary on a very ing flexue at or apiral, reaffest scape which gets coiled after politication.

Common at the bottom of pends, datches and causis

Flowers and Fruits . Aug.-Oct I K Maheshwari 554

## 99. Orchidoceae

## Zeuxine Lindt ourr Roep

2 stratemination (Li v.) Schler Orch Doutsch N. Gwin. 27, 19-1 Holitum, Fl. Mal. 1 : 131

Urchis strateumotica Lina. Sp. Pl. 943, 1753

Zen me va coto L ad! Gen & Sp Oreh 485, 1840, FBJ 6 106 A some a terrestrial herb, usually 5-10 cm (all Leaves 5-10 > 0.4 cm near a am hate passing into onear bracks. Flowers pick in densely th wered 2.5 x I cm racemes Bracts ovate-lanceolate, acuminate, mace tonger than the overy Petals forming with the dorsal sepal a bond to the column Capsules ellipsoid.

Rare Conected it a flowering state from the moist, turfy ground behind the Botany Division, I A.R I., and along the 'bunds' of fields near village Gheors. Often escapes notice due to its small size and its

being hidden amongst the grasses

Flowers : Feb.-March J K. Maheshwart 1409

#### 100. Musaccae

Mass Linn.

M paradislaca Linn Sp. Pl. 1043, 1753; Moore in Baileya 5

M paradisiaca Linn, subsp. sapienium (Linn.) K. Schum, in Pfreich 4(45) - 20, 1900, Cooke, Fl. Pres Bomb 2 , 742.

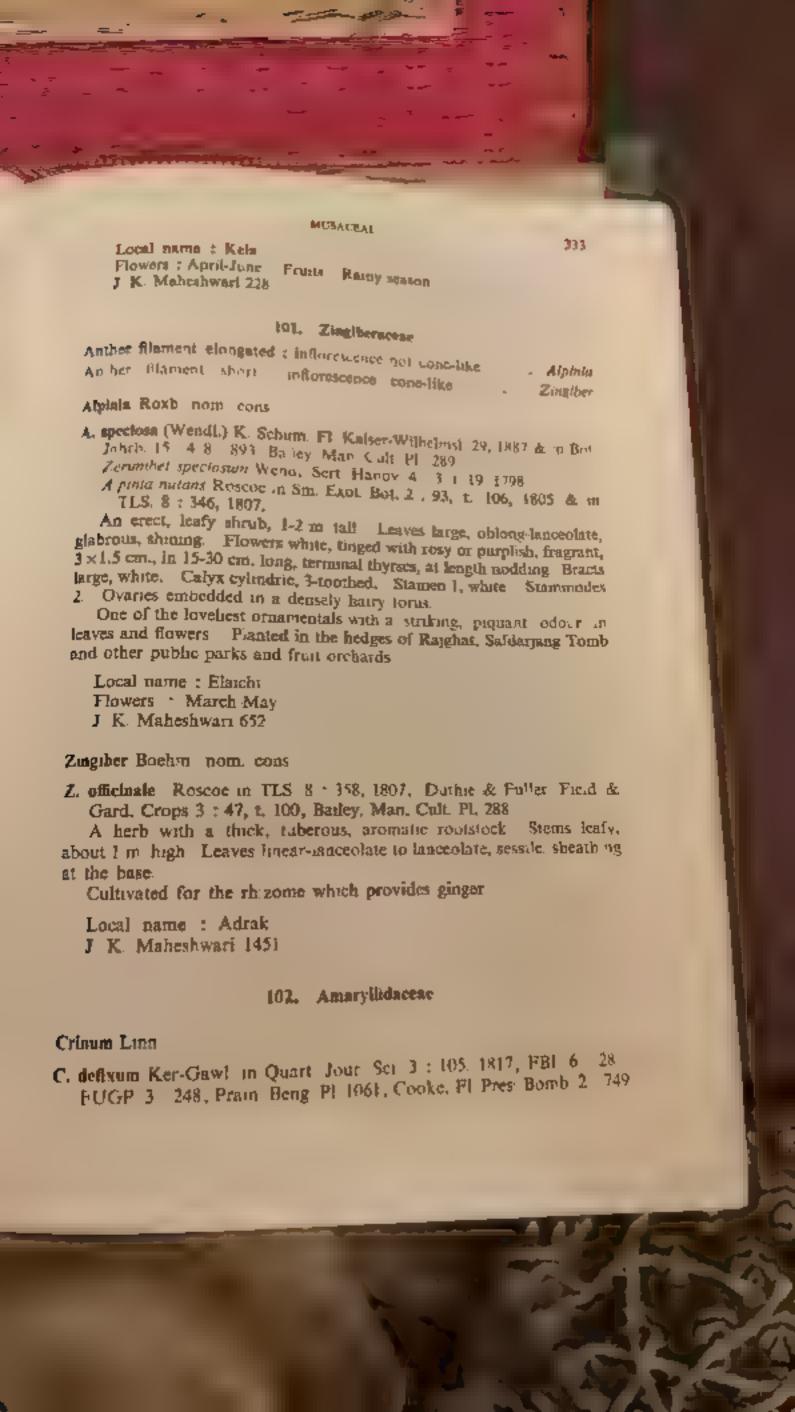
M paradisiaca Linn var sapientium Kuntze, Rev Gen 2, 692, 1891. Bancy Man, Cut. Pt. 286.

M soplentum Linn. Syst. 1303, 1759; FBI 6 262.

A stoloniferous plant, 2.5-3.6 m tall. Leaves large, oblong, erect or ascending. Spikes drooping, about as long as the leaves. Bracts manyflowered, decideous Flowers 60 < 7 mm Fruits oblong vellowish-green when tipe sweet edible. Seeds brown, sh-basek (if present)

Planted by suckers in fruit orchards and garden shrubberies near houses on moist son. It grows well in Delhi and is used as vegetable The sterns and flowers are also eaten after cooking. Once planted, it requires utile care





C astaticum Roxb. Fl. Ind 2 127, 1832 (non Lina ) A st I lowly herb or undershrub. Leaves erect, linear, concave area i lowly herb or undershrub. a one stout scape. Per anthtabe equal up the spreading, linear or linear cancer late 1 thes. I has being free. Authors linear. Fruit subplobuse

Commonly planted in hedges around gardens, near temptes, etc.

Local name : Sukhdarshan Flowers : Oct.-Dec J K Maheshwari 853

## 103. Agavaceae

Leaves usually spine-edged Leaves mostly entire

Agare Linn

Leaves in a close globose rosette, never exceeding 90 cm in length

Leaves in a lax rosette or tufted, never less than 90 cm. in length

A. wightii Dr. & Prain in Agric Ledger 13(7) 91, 1906 (sub att. J.), FUGP 3 : 244, Parker, For Fl. 512.

Trunk stout, usually conspicuous. Leaves ensiform, linear-lanceolate. up to 100 x 10 cm., many, forming a stiff rosette; marginal prickles spreading or erect, with a small, brown cushion, sharply recurved and paramet to the leaf edge; terminal spine paie, decurrent.

Commonly planted as a hedge along the 'bunds' of gardens.

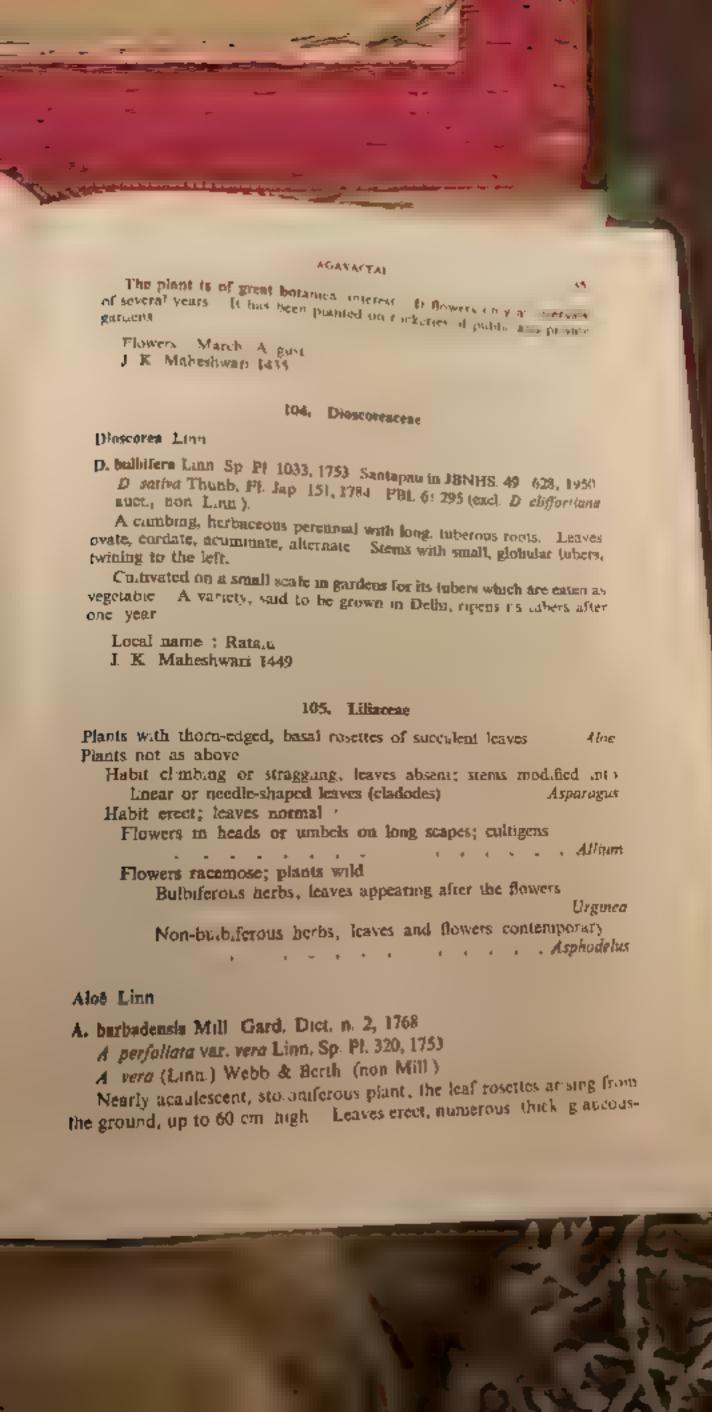
A. mexicana Dr & Pram in Agric. Ledger 13 (7): 88, 1906 (sub Ltt F), FUGP 3:243

Duthie in FUGP (loc. cit) records this species in the arid strip between Gwalior and Delhi under A cantala Apparently it is the first Agave to reach India from the Pacific coast of C America.

#### Yucca Linn

Y. gloriosa Lunn Sp. Pl. 319, 1753, Barley, Man Cult. Pl. 241

A stemless or shortly trunked plant. Leaves 60-75 x2 cm, entire, yellow-edged, mostly clustered in rosettes at surface of ground, flat with margins raised, apiecs needle-pointed, red. Inflorescence an erect, long paniele with alternate branches, usually overtopping the leaves. Flowers greenish-white, produced in profusion on a solitary, central scape, drooping, bell-shaped, hermaphrodite Perianth lobes waxy in texture Stamens 6, embracing the ovary. Styles connate forming a central canal; stigmas 3, each bilobed and forming a stigmatic chamber below.



green, tanceolate, long-acumenate, thorn-edged. Flowers vern though coloured, in simple erect tacemes, the lower flowers fulling off as the takeme the gutes. Stamens equalling the perianth

Crown in gardens as a bed- or pot-plant for its peculiar foliage

Flowers March-April J K Maheshwari 966

### Asparaging Line

4. racemann W //d Sp Pt 2 152, 1799 FBI 6 316 FUGP 3 259, Parker, For Fl. 520

A stragging of scandent, much-branched, spinous herb or shrib Stems wouldy grey white. Spines subtrect or subtrecurved. Ciadodes 2.6 t gether narrowly obiong-linear, falcate. Plowers small, white in southery or fascicled, simple or branched racemes. Berries globose, produced when leaftess.

Waid on the R dge as well as in the neighbouring hilly tracts of Gargaon. The plant was observed to produce abundant fruit near Garukul (Faridabad).

Local name: Salawar: Phusar Flowers: During rams. Fruits: Cold season J. K. Maheshwari 215; 824

## Allian Lan

Leaves cylindric and usually fistular.

Leaves plane, flat or keeled, not hollow

Builbs long, cylindric, simple; heads bearing flowers only

Rulbs short, compound, heads bearing both flowers and bulbils

A cepa Linn Sp. Pl 300, 1753, FBI 6 337; FUGP, 3 267

Bulbs large. Leaves radical, hollow, bifarious Flowers many, white, in dense umbels with both flowers and bulbils, subtended by 2 or 3 reflexed bracts. Stamens exserted.

Cultivated as a cord season crop to some parts of the district

Local name Piyaz; English name · Onion Flowers Nov - Feb J. K. Maheshwari 1076

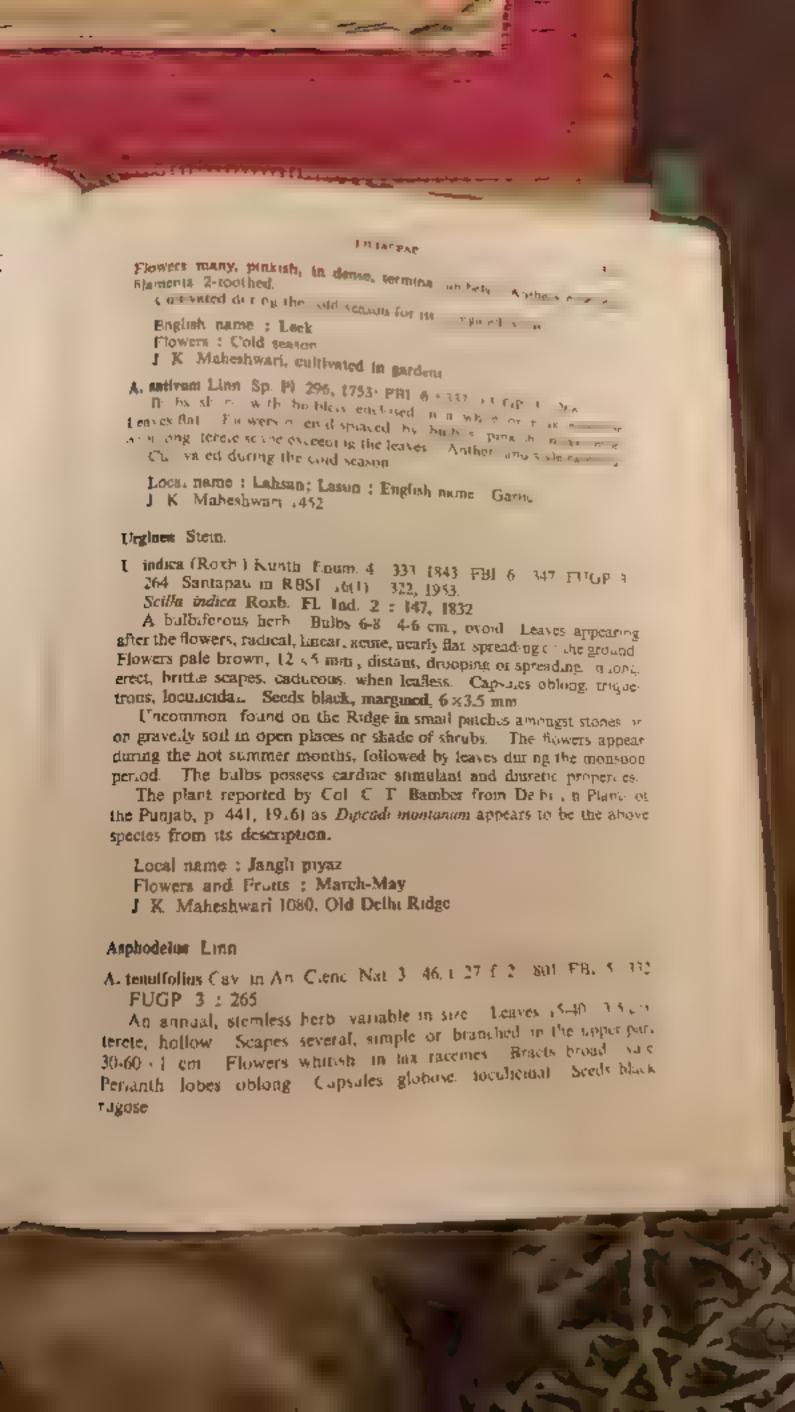
A. porrum Linn Sp. Pl. 295, 1753, Bailey, Man Cult Pl. 246.

A ampeloprasum Linn, Sp. Pl. 294, 1753, FBI, 6: 337; FUGP, 3:

A stout, 40 ft. ...

A stout, tall plant Buibs long cylindric, simple Leaves flat, keeled





A common winter weed of cultivation in moist localities. Also found in moist, waste and unused ground

Local name . Plazi Flowers and Fruits : Jan.-June J. K. Maheshwart 1977

### 106. Smilacacese

#### Smiles Lan

S. prolifers Roxb. Fi Ind 3: 795, 1832; Fill 6 312, Brandis, Ind. Tr. 641; FLGP 3: 261

S. laurifolia Roxb. Fl. Ind. 3: 793, 1832

A stout, combing prickly shrub with tendris. Leaves variable, 10-5, 7-10 cm, objeng-ovate to orbicular conaccous, 1 to 2 nerved, refine with an ampiecicaul, numerical sheath at the base. Flowers will tell directions. In 10 or more, many-flowered, about 15 × 15 cm, timbers,

Grown as an ornamental along the outer walls of gardens or along poles etc. The flowers usually fall off without producing fruits.

Flowers: Jan.-March
J K, Maheshwari 1078, Mughal Gardens

## 107. Pootederiaceae

Petioles swollen into floats, perianth tubular below, anther filaments not horned

Petioles no, enlarged to form floats, perianth segments free, filament of one larger anther horned on one side

Monochoria

# Eichharnia Konth nom. cons.

E crassipes (Mart., Souths in DC Mon., Phan. 4., 527, 1882, Merr. Erum. 1., 200, Haines Bot. Bib. & Or. 1102.

Ponteuerio crassipes Mart. Nov. Gen. Sp. Pt. 1., 9, t. 4, 1823.

A floating aquatic, profusely rooting at the nodes. Leaves rosetteforming spathulate or naddle-shaped, petioles swollen into green bladders. Flowers violet-blue, in many-flowered spikes. Ovaries 3-cetled.

A beaut ful plant introduced from America Common during the monsoon period in Hindan River, Najafgarh Canal and other ponds

Figure hame Bengal terror, Water-byacinth Fiowers and Fruits: Sept.-Nov.

J. K. Maheshwari 346

Monoc Monoc An

Inneed uense pedice outsid Fruits

of the H B. Caort

Perfe

J.

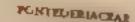
Perf

Com All

C.1

bea od cel

the



#### Monochoris Presi

Mosochoria sp. (vaginalis Presi 7)

An amphibious herb, 30-100 cm high Leaves ovate to ovate-tencedate 6-13 25.5 cm usually acuminate Plowers white, in rather dense racemes pedancies emerging from the sheaths of appeal caves pericely in fruits up to 2 5 cm , long Perianth cohes 6, pa c green in he puts de l'imments of large unifier with an acute process un one vie Fruits about I cm long obling Seeds ovoid, many tiched

A weed in the inimidated rice fields, water marshes and modely some of the binjafgarh Drain often a association with Sag trains guaranteers; H B & k., Yumphaea nouchall Burm f., and Sphenucica zeytanica Gaerth

Local name : Puzi; Panighas Flowers and Fruits ; Sept.-Oct. J. K. Maheshwari 450; 1324

## 108. Commelinaceae

Perfect stamens 3; cymes enclosed in spathaceous bracts Perfect stamens 6; ocreate leaf sheaths flower-bearing Commelina

### Commelina Linn.

All the ceils of the overy 1-ovaled, seeds smooth The two anticous cells of the ovary 2-ovuled, the posticous 1-ovuled Leaves usually ovate, broader; seeds rugose Leaves lanceolate, narrower, seeds smooth, truncate at one end-Spathes broad ovate, ovary 5-ovaled but capsules usually 3-seeded, posticous cell not keeled . . . . . . . . . . . . C. forskaln Spathes ovate-lanceolate; capsules usually 5-seeded, posticous cell keeled .

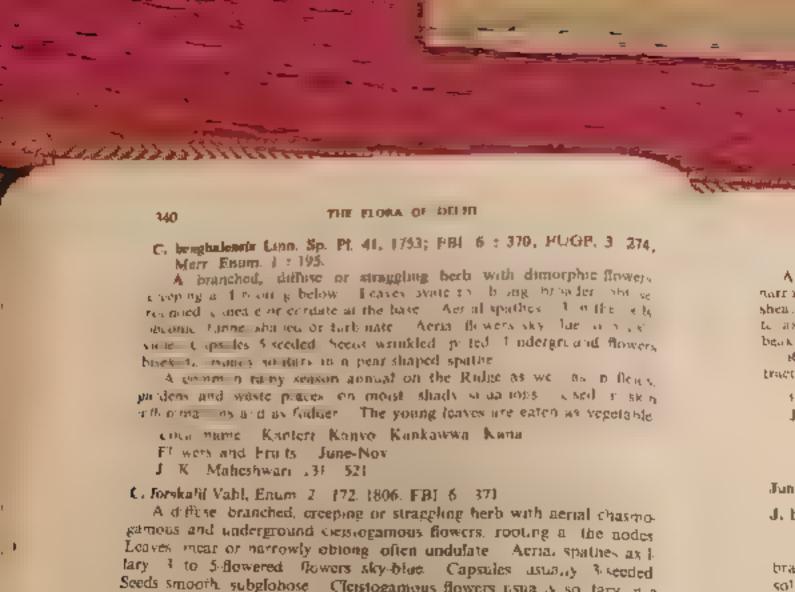
C. kurzli Ci in JLS. 11: 444, 1871, Barnes in JBNHS 46: 87, 1946.

A straggling or erect, tall herb, 60-90 cm, tall. Leaves 10-15 < 2-3 cm. variable, lanceolate, scabrous or villous, sheaths 2.5 cm, long, the mouth bearded. Spathes sessue,  $2-2.5 \times 1.5-2$  cm., nearly as broad as long, crowded in terminal heads, scabrous. Flowers violet-blue. Capsules 3celled, cells 1-seeded. Seeds smooth, lead-coloured

Found in moist, ahady places of gardens and lawns. Also occurs in the hilly plateaus, spreading upon rocks and growing in the crevices of stones.

Flowers and Fruits : Aug.-Oct. J. K. Maheshwart 298, Roshanara Gardens





lary 3 to 5-flowered flowers sky-blue. Capsules assauly 3-seeded Seeds smooth subglobose. Clessogamous flowers usually so tary nia spaths, bisexual, reduced. Capsules usually I-seeded

LCT

70

ret

515

Apparently a new record from the north Indian plans. Common in he Ridge in sandy depression, amongst stone in the shades of shrubs, esc becoming abundant in local patches. Also found in fields, gardens and waste piaces. Common around Najafgarh vil age on damp. sandy so and an hedges along bunds' of fields. Easily distaguished from C henghatensis Linn., by its linear leaves and smooth seeds. Used as cattle fodder and as vegetable.

Local name Kankawwa , Kana Flowers and Fruits : Aug.-Nov J K, Maheshwari 432; 1050

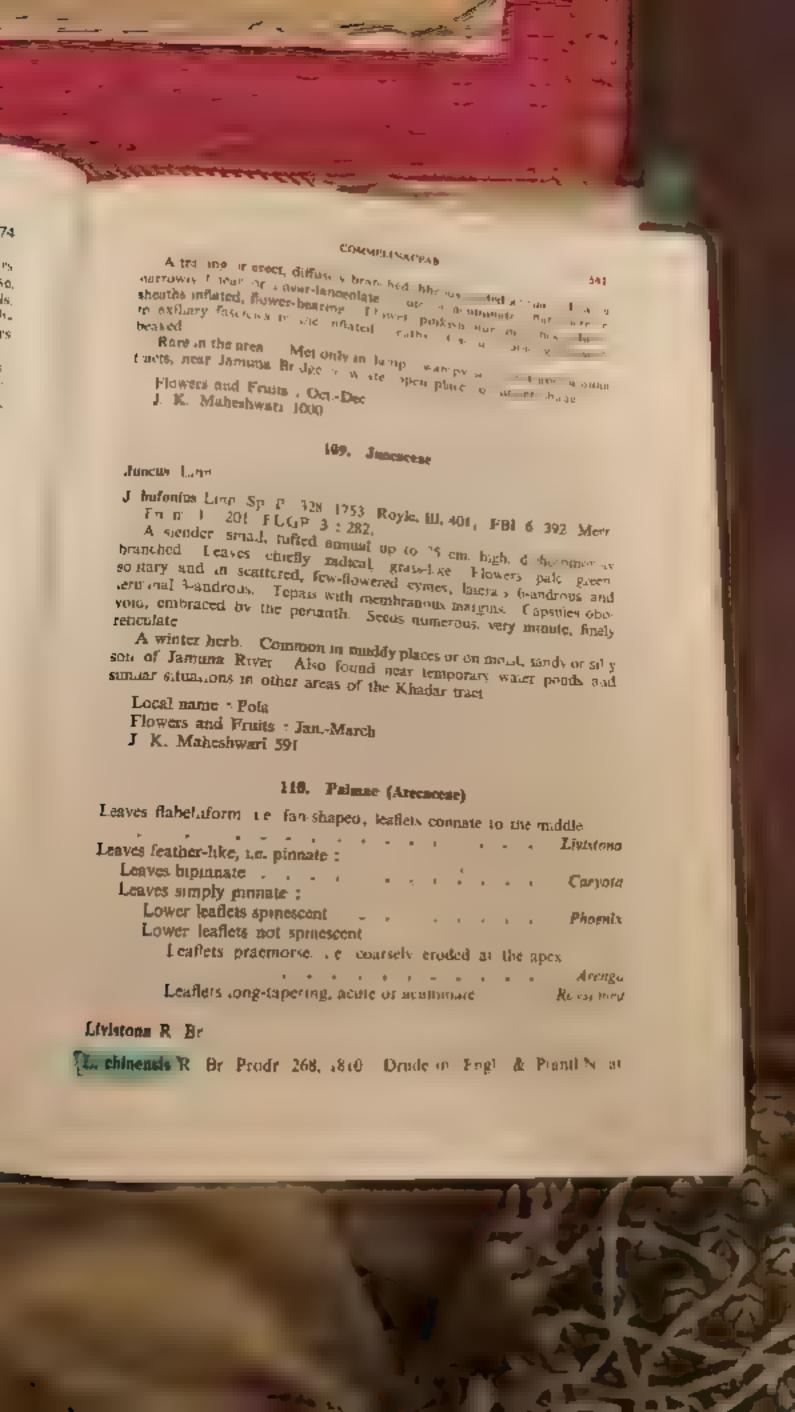
C. hasskarlif Cl. Comm. & Cyrt. Beng. 13, ( 5, 1874 & in DC. Moo. Phan 3 157, FBI, 6 370; FUGP, 3 : 273,

the occurrence of this plant is included on the authority of Dathie n FLGP foc, cit ) who records at from Delhi to N Oudh

A glabrous or pubescent, much-branched herb Leaves narrowly la recolate. Spathes axillary, ovate-lanceolate, cordate at the base Figwers in pubescent, unequal evines, the lower branch 1 to 2-flowered, apper 2 a 4-flowered (apsures quadrate, apiculate Seeds by indrie

Cynnotis D Don nom cons

C. axillaria Schult f. Syst. 7 - 1154, 1830, FB1 6 - 388; FUGP. 3 : 280 Tradescantia axillaris L nn Mant 321, 1771



Pfam. 2 335, Blatt Palms 104 t 26, Barley Man Cu 1 P 168

Latonia chinensis Jacq Frag Bot 16 1 11 .809

A stold, fan-pair. Frunk bearing the bases of pet hes and fibrous tissue. Leaves remformly flabel ate 1.2 f.8 m in diam, much plicated cut to about the middle segments linear-lanceous e here ng sharing downwards with age. Spairs pamentate, surrounded at the base by spathes. Flowers small, white liteats place shaped, obtong-edipsoid, back.

Grown common's in gardens and in front of bungalows as a tak

fan-palm for decoration.

Fruits \* Dec

J. K. Maheshwari 577, Nicholson Gardens

#### Caryota L op-

C. tutous Linn Sp. Pi. 1189, 1753, FBI 6 . 422, Brandis, Ind. Tr. 654, Rt. Paums 339, t. 57, f. 48, Santapau in RBSI 16(1) 327, 1953

A tail feather-leaved palm Trunk greyish-hack, with regular transverse hands. Leaves bipinnate the primary divisions arched and drooping. Leaflets fasciculate or alternate, cunerform, ohi quely truncate, fish-tail-nike. Spadix very large, 2.5-3.5 m long. Peduncle curved, covered over with large, conaceous spathes, branches very long, pendulous, resembling a huge horse-tail. Male buds narrowly cylindric. Fruits dark purple, pernearp thin.

Planted in gardens and shrubberies.

Flowers Major part of the year. Fronts: July

J K. Maheshwan 643. Rashtrapan Bhavan Compound, 1180

#### Phoenix Linn.

Foot of stem often surrounded by root suckers, leaflets making a very acute angle with the common petiole

No root suckers:

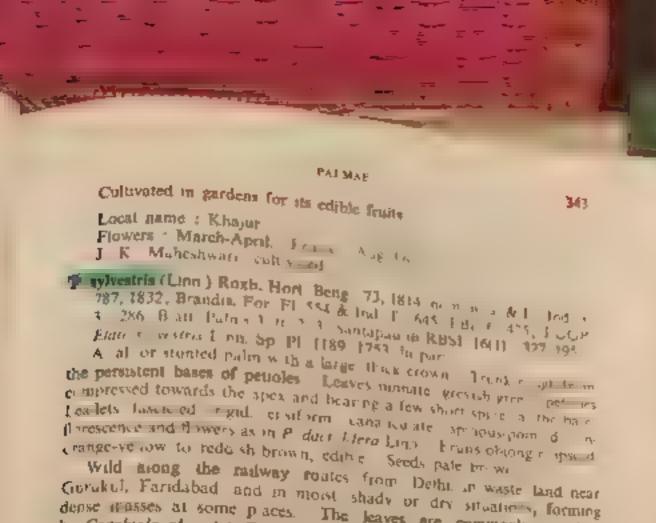
P. dactyl.fera

Pinnae usually more than 2-ranked; leaves stiff or rigid

P. ductylifera Linn, Sp. Pi 1188, 1753, Brandis, For, Fl. 552; Blatt. Palms 24, 1 8.

A tail tree Trunk covered with the persistent bases of petioles, the fool often surrounded by a dense mass of root suckers. Leaves longer than those of P sylvestris Roxb. Pinnae distichous, petioles laterally compressed. Male panicles compact on a short pedancle; flowers sweet-sented. Fruits oblong, reddish or yellowish-brown when ripe, with ed ble flesh. Seeds cylindric,





dense masses at some places. The leaves are commonly attacked

Local name : Khajoor

P. rupicols 1 Anders in JLS 11 13 1871 Haines But Bib & Or 883 Biart Palms 14 t 5 , Balley Man, Cult PL 171.

A slender, graceful palm, 45-6 m high Leaflets bifar in s, not uscicled, flaceid, bright green, decurved peticle compressed

Planted as an ornamental palm in gardens, for its handsome appearance

Arenga Labill, nom. cons.

A. saccharifera Labill in Mem. Inst. Par. 4; 209, et 6, 7, 1803; FBI 6:421; Brandis, Ind. Tr. 648, Blatt Palms 353, t 60

Gomutus saccharifer Spreng, Syst. 2: 624, 1825

A beautiful stout palm Crown oblong dease Leaves large, oblong-ovate in outline Leaflets bucar, 4 to 5-far-ously fascicled coriaceous, white beneath; base 1 to 2-ancicled

One of the most beautiful and ascful palms. Cultivated in Deibi It flowers about the tenth year

English name : Sago palm J. K. Maheshwari, passım in gardens

Roystonea O, F. Cook

R. regla (H B & K ) O F Cook in Bull Torrev Bot Cl 531, 190 Bailey, Man. Cuit. Pt. 173



Oceado na regia II. S. & K. Nov. Gen. & Sp. 1 : 305, 1815, Biat

Pro no. 196, L. 73.

A tall anarmed, annulate, praceful palm, 12 m, or more in tal ness with a columnate, single bole. Trunks untooils, covered all over with a which substance, generally more or less thickened or the middle terms very lattic term on, principle lenf shealing a regate. Lenflets from pary account ensistent, many nerved lengthwise, upox sourt parties.

commonly placed in public guidens and parks along the rosses when I torms a magnificent avenue by its striking appearance. Such fine of when a timet in Edward Park (near Red Fort), Nic tolsop Chardens their Kasamere Cate) and in the compound of Jantat Manuat it New Oeles.

Local name : Bottle polm J. K. Maheshwari 1428

## 111. Pandanaceae

Pandamis Linn. f. nom. cons. prop

P. fascicularls Lamk Encycl. 1 . 372, 1785 . FBI 6 485, FUGP 3

P vdaratissimus Roxb. Fl. Ind. 3: 738, 1832

P tectorius Soland ex Baif. f in JLS 17: 63, 56, 1878, Haines, Bot.

A much branched, thick bush or small tree, 3-16 m high Leaves borne closely spirally, erect, acummate; margins and keels usually spinousers pedicellate, stamens many

Planted in thicks.

Planted in lawns and near temples for its very fragrant flowers

Local name: Keora Flowers: April-May J. K. Maheshwari 711

# 112, Typhaceae

Typha Linn

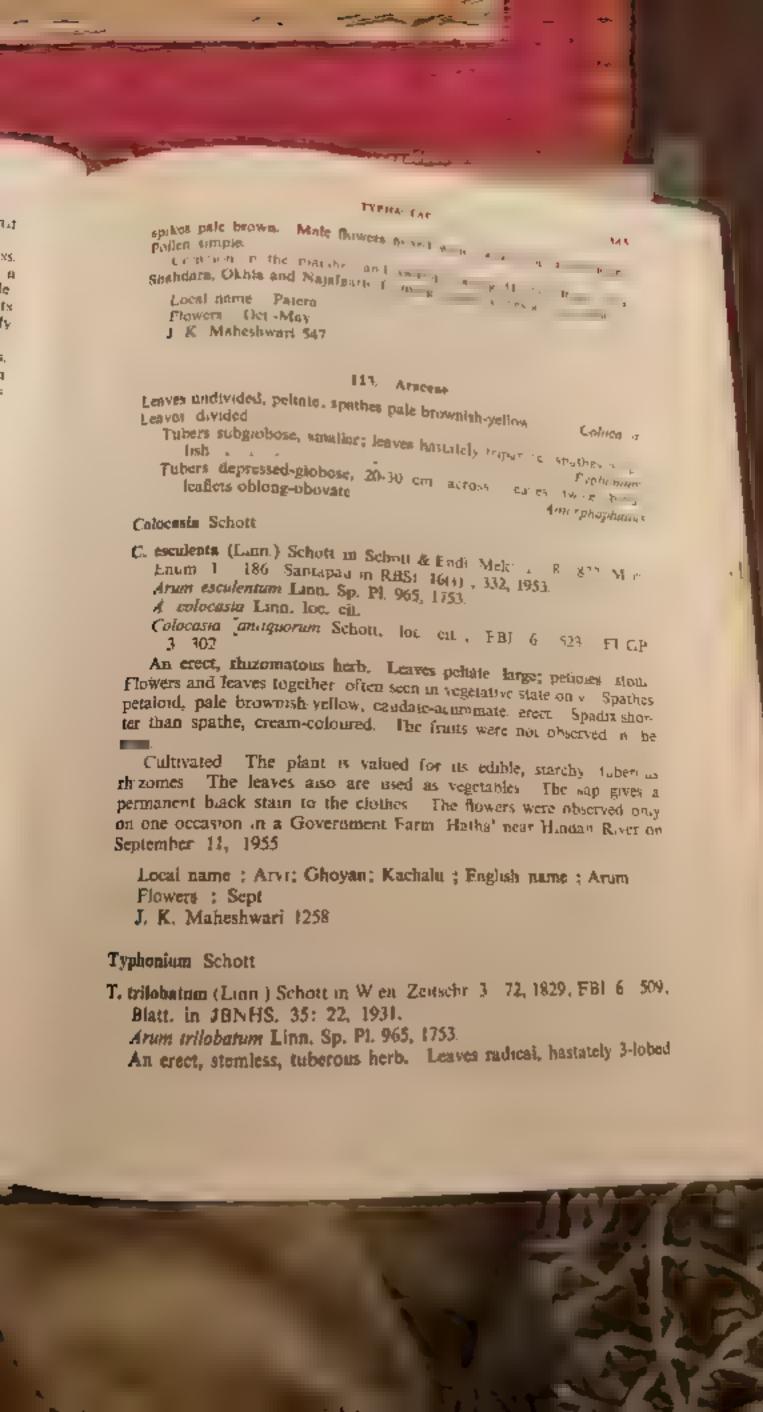
1, angustata Bory & Chaub Exp Sc Mor 3(2): 33, 1832; FBI. 6: 489.

Gracian in Pfreich 2: 14 f 4 F Santapau in RBSI 16(1): 328, 1983.

A presentation Gr. 227, 1839 (non Roxb.)

A perennial, tall, marshy shrub, 15-3 m, high Leaves usually exceeding the flowering stems, semi-cylindric above the sheath. Spikes Cylindric, the maies and females separated by a long interval. Female





or tripartite long-petioled, reticulate vented, entire, petiole bases sheething. Pedincle long, thick, curved. S rather evate, narrowed bito a

to g point, purplate baswers buenual.

Copyr as a herbacoous undergrowth in a fret orchard Bagh Peoper. walls Seed to Kent 5 he manual. From the local gardeners it was gathered that it few spectment were planted you're years ago and now it has spread maker's ger roly in this garden. It is helicited to center if a very butter prize ple-

Flowers and Fruits : June-Aug J. K. Maheshwart 1121, on July 10, 1955

Amorphophatius Bl. ex. Decue, nom. conv.

4, exempanulates (Roxb.) Bl. ex Decise, in Nouv. Ann. Mus. Par. 3. 366 1834 (exc. syn. practer Roxb.) FBI 6 5.3, FLCiP 3 300, Blatt. in JBN:48. 35 : 26, 1931

Aran campundatum Roxh Hort Beng 65, 1814, non-mid & Pl Cor-3 \* 68. t, 272, [820.

A perennial, stemless herb. Tubers depressed globose dark brown. Leaves one or two, radical, large, twice bifid, on long, tapering petioles Leaflets oblong or obovate, acute, spreading,

Custivated in small quantities in some gardens. The luberous roots

are bound and eaten as vegetable.

Local name : Zamankand J. K. Maheshwari 1434

## 114. Lempscear

For a detailed account on the floral morphology of Indian Lemnaceae, see Charles McCann in JBNHS, 43: 148-163, PL 1-9, 1942

Fronds with roots :

Fronds with several roots Fronds with one root Spirodela. Fronds minute, rootless Lemna Wolffia

Spirodela Schleid

S. polyrhiza (Linn.) Schleid, in Linnaea 13 · 392, tt 5, 6, 1839 , FUGP 3 365, McC op cit. 156.

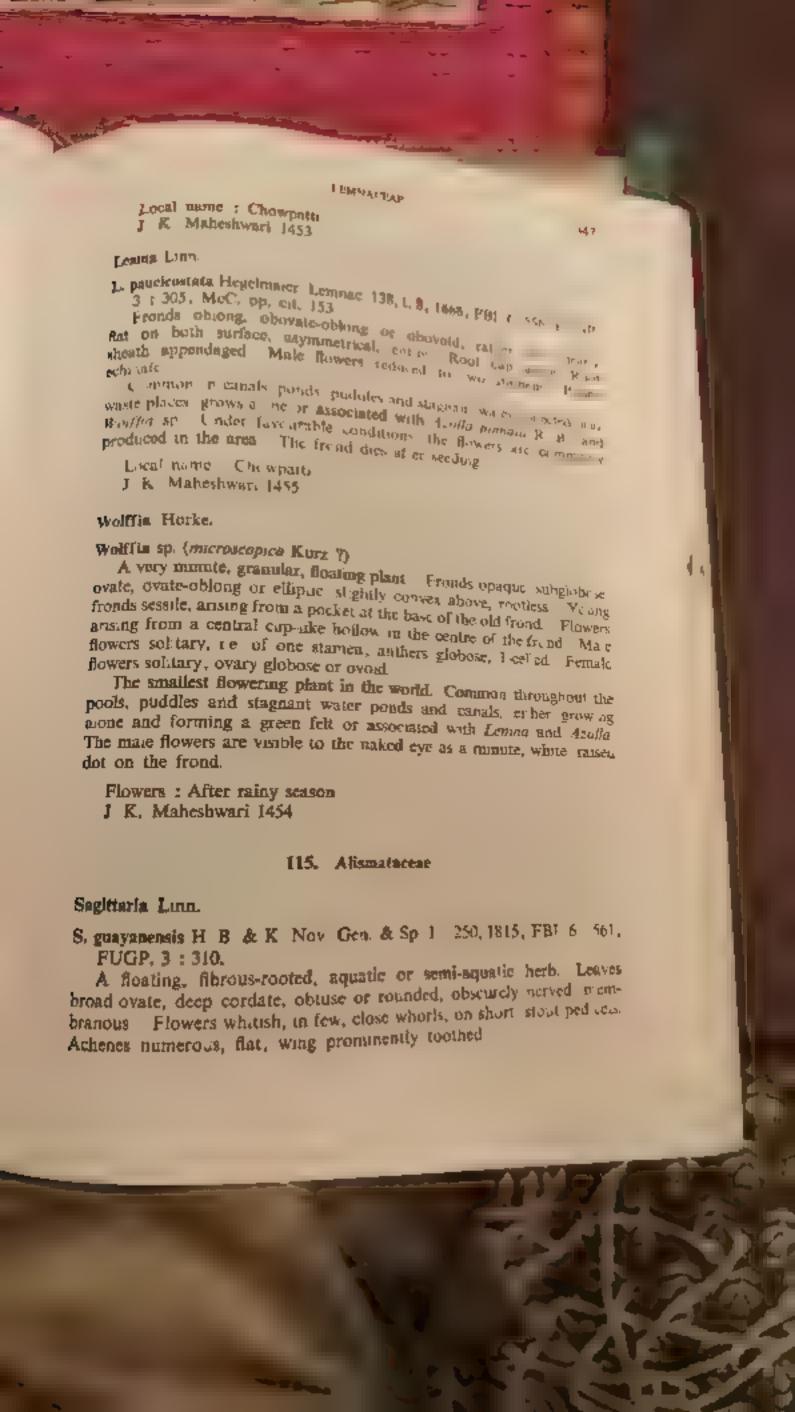
Lemna polyrhiza Lina. Sp. Pl. 970, 1753; FBI, 6: 557,

Fronds berbaceous, broad obovate or orbicular, floating, opaque, thick, flat above, slightly convex below, dark green above, usually purpush beneath, each frond with multiple roots.

Common in the water of ponds, puddles and canals, often growing

alone and forming a felt on the water surface.





Common after the rains in Nausigarth Drain as a flowing aquate in shanow water or se proquents on a madely marchy graind more ared as its species of Monocharas Spheno test and 11 in Asso met as a week a florided rice fields.

Flowers and Fruits \* Sept.-Oct 1 K Maheshwari 438

## 116. Aponogetonacene

## Aponogeton Lung. f.

A. natura (Linn.) Engl. & Krause in Pfreich, 24 : 11, 1906

Sourieris nations Linn Mant. 227, 1771

Aponogeton monostachyus Linn, f. Suppl. 214, 1781, Cmonostach, on's FBI 6; 564; FUGP, 3; 313.

A floating scapigerous aquatic herb Leaves obling to thear obling 7 is ci 8-3 cm acute or rounded, petiole slender, much anger than the biade. Flowers bright pink or bluish-purple in solitary, deniety flowered spikes. Stamens 6, anthers coloured. Seeds ribbed.

The plant is known to occur in the plants but was not collected by Do bic (IUGP loc cit). Occurs in quiet water collected in ponds near Shahdara, where it flowers and fruits after rains.

Flowers and Fruits : Aug.-Nov.

P. P. Khanna 1108, Shahdara

# 117. Potamogetonacene

## Potamogeton Line.

Upper or all leaves floating, elliptic or elliptic-lanceolate P indicus
Leaves all submerged
Leaves finform P crisped, translatent P crispus
P indicus P -- P. pectinatus

P. indicus Roxb. Fl. Ind. 1 457, 1832, FBI 6: 565; Aschers & Graehn A floating or march.

A floating or march.

A floating or marshy, aquatic herb, brownish, pale purple throughout Stems erceping below. Submerged leaves lanceolate, very thin, floating ones emptic, emptic-tanceolate or oblong, thicker. Stipules scarious brown in colour. Fruits 3-ribbed on the back.

Common in Hindan River and temporary water ponds and marshes

Flowers: Cold season Fracts Summer season



POTAMOGETONACEAE p, crispus Linn. Sp. Pl. 126, 1753 FBI 6 Sec. F Cap. A slender, submerged, aquatic herb to the C.P. or linear-oblong, crisped, finely terris a trace 340 or linear-on long, generally acres for a street to a Common in shallow, temporary water to and acar Flowers and Fruits : Cold and summer year my J K. Maheshwari 570: Tel Lehl Shab ara p peerinatus Linn S. P. 127 1757 FBJ 6 562 FC (4) A hi long grass-like much bear hed agen where I have for Supules long-sheathing. Spikes acros) of an arrived from supplies tong in distant whorts. From is obtique hardly keep 1 Common in similar situations as P. crispus Linn Flowers and Fruits : Cold and summer seasons J. K. Mahoshwart 553, 1279 118. Zannichellincene Zannichellia Linn Z. palustris Linn. Sp. Pl. 969, 1753; FBI 6 568 Ft GP 3 3 6 A slender submerged aquatic berb Leaves fill im, pseudoventchiate. Flowers minute, unisexual. Male flowers subtended by a spathe, monandrous. Female flowers with a hyat se tubular pens in Carpels with an obliquely peltate, large stigma. Fruits stipitate horned Common in quiet or slowly moving water of Jamuna and Handan Canals and ponds In general appearance it resembles vegeta ive plants of Potamogeton pectinatus Linn. which, however, bears flowers in short spikes. Flowers and Fruits : Oct-Feb. J. K. Maheshwari 589 119. Cyperaceae Nut enclosed in an utricle; florets unisexual Carex Nat not enclosed in an utricle : Flowering glumes distichous Flower ng glumes spirally arranged or sometimes the lowest subdistichous : Style base dilated and constricted or articulated above the nut Hypogynous bristles present, leaves absent Hypogynous bristles absent, leaves usually present Style base often persistent, if falling not leaving a tumor on Fumbratylis the nut

Style deciduous, leaving a tumor on the nut

Bulbostyltz

C pumilus

Style base not delated, continuous with the put Nur with or without hypogenous bristles, style base not swollen

Nut with 6, hypogenous scales, divided to the base into linear segments, stigmas 3 Erlophorum

#### Corex Line

C. fedia Neus in Wt. Contrib, 129, 1834

C wallichiano Prese ex Nees, loc cit (non Spreng).

An erect, giabrous herb with a stout thizome bearing fibrous roots. 60 cm or more in taliness. Stems irrquetrous, leafy Leaves longer than the influrescence, connecous, scabnd Panicles 25-40 cm long, lax, spikes 5-8 i cm dioectous, long-tailed by the upper male portion. Female spices ovary naked, sigmas 3, prominently exserted. Utticle harry longitudinally nerved. Nuts trigonous, brown

Common along the progation channels running across the fruit orchards near Azadpur and Karnai Road and those located along the

realway ones from Delha to Azadpur. Used as cattle fodder

Local name : Moths Flowers and Frants: Feb.-April J. K. Maheshwari 929

# Cyperus Luan, scusu lato

Stigmas 2, nut compressed or flattened:

Nut flattened, rachilla of spiketet persistent:

Nut compressed radially to the rachula

Nut compressed tangentially to the rachilla:

Spikelets in a large, terminal, compound umbel

Spikelets in a small, apparently lateral head C alopecuroides

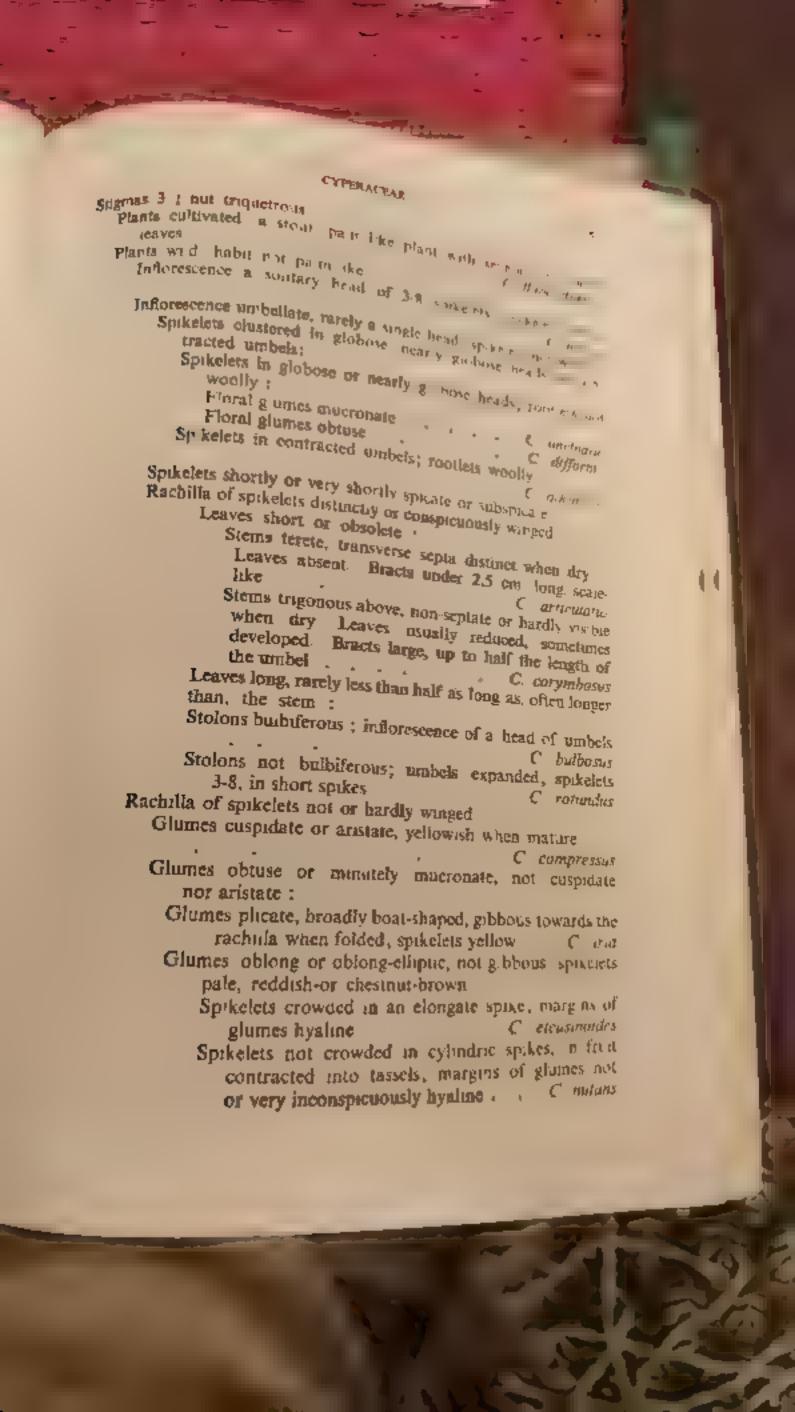
Not laterally compressed, rachilla of spikelet deciduous : C. laevigatus Giumes many, heads large, dense, spikeleis greenish

Glames 4-5 only; heads smaller; spikes capitale, white :

Spikes 3, aggregated into a compact head . Heads solitary :

Nut bearing glume with a crest on the keel .

Nut bearing glume not crested . . . . . C. kyllingia C. brevifolius



10

C pumilus Linn Cent Pl 2 6, 1756 & Amoen, Acad 4 302, Kackenth n Pfreich 101 375, f 44 A-E

Present nitens Nees in Nov Act Nat Cur XIX, Sappl 1 53, 1843, (1 n FBI 6 59)

P. pamilias Dom. in R.bl. Bot. 85 417, 1916.

A year, glabrous, fibrous rooted, tufted plant, up to 20 cm, high Lives arrowly uncar acuminate midrib prominent. Inflorescence an or her of spikes on stender rays, primary bracts fonar, much exceed eg he i florescence. Spikelets 10-30 in a spike, linear, compressed, many. wered. 2 ranked. Grumes ovate keel excurrent ir to a curved mucho the wings nervoiess. Nots ellips aid or obovoid, compressed

Occurs along the banks or in the drying beds of Najafgarh Cana in will, stocky sout

Flowers and Fruits : Aug.-Oct J. K. Maheshwari 441

C. alopecuroides Rottb Deser & Icon 38, t 8, f 2, 1773, Kackenth

Juncellus alopecuroides CI in FBI 6 - 595, 1893, FUGP 3 . 340,

Blatt & McC in JBNHS 37 + 33, 1934.

An erect stout, glabrous, marshy sedge up to 15 m high. Leaves mear acuminate. Spikelets pale brown, numerous, in compact, broad spikes arranged in a compound inflorescence, primary and secondary rays umbenate. Glumes boat-shaped, keeled, acute or apiculate. Nuts broadly obovate, dalf white or pale brown

Occurs along the banks of canals and ponds.

Flowers and Fruits : Aug.-Oct.

J. K. Maheshwari 477, Najafgarh; 888; 974, Roshanara Gardens

C. laevigatus Linn Mant 179, 1771, Kuckenth op. cit 321. Juncellus laevigatus Cl. in FBJ 6 - 596, 1893, FUGP 3 . 341, Blatt

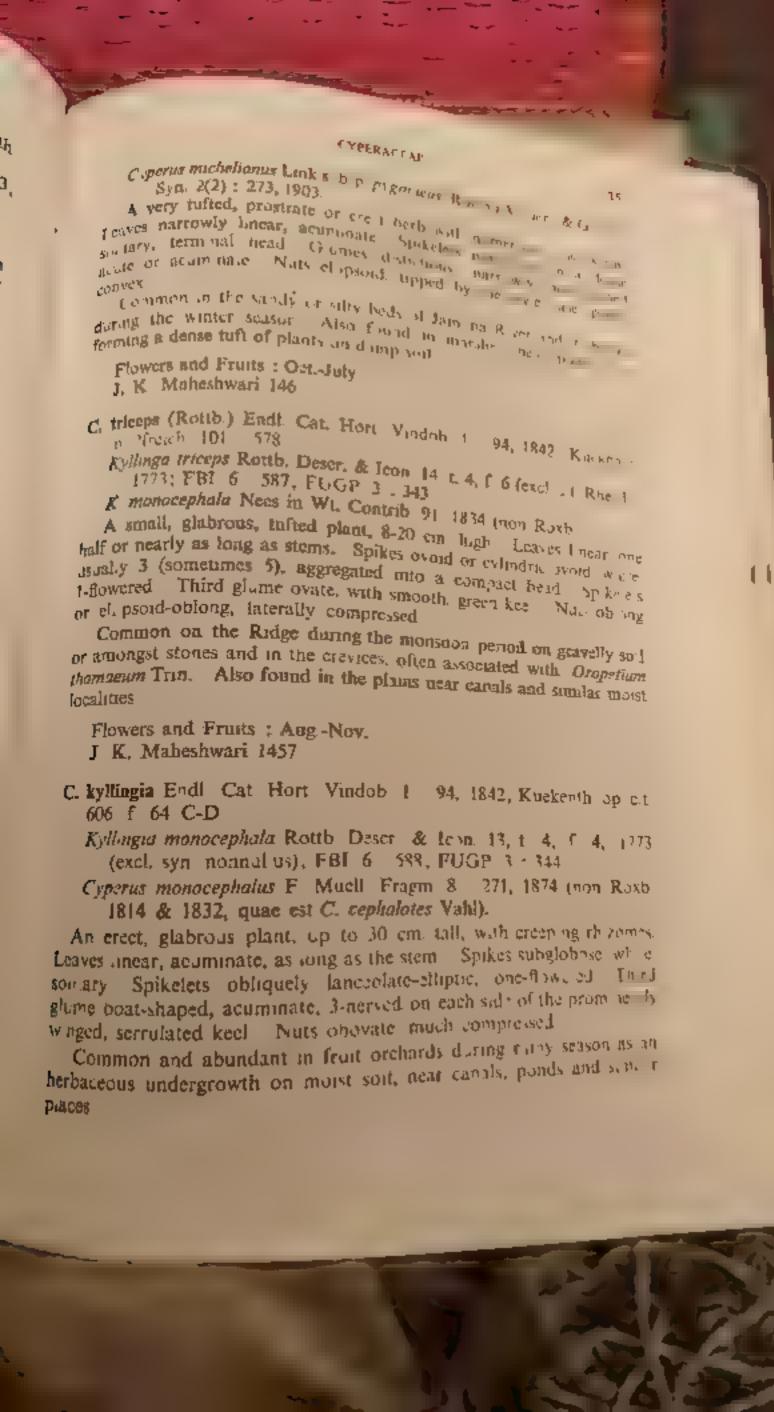
An erect, giabrous tufted plant, up to 40 cm high. Stems nearly terote, polished, bright green or straw-coloured, covered at the base with closed leaf sheaths. Leaf biades often undeveloped. Spikelets up to 15 in a compact, one-sided head, sometimes solitary, pale straw-coloured Glumes broad evate acute. Nuts broad ell psoid, brown, smooth

A plant of temporary moist localities, marshes, sandy beds of river and muddy soil

Flowers and Fruits: July-Sept. J. K. Maheshwari 312, near Okhla

C. pygmaeos Rotto Descr & fcon. 20, t. 14, ff 4, 5, 1773 Juncellus pygmaeus C! 10 FBI. 6: 596, 1893, FUGP. 3: 341.





Local name, Bhada, Motha Flowers and Fruits; June-Sept J. K. Maheshwarl 108, 406

C. bervifolius (Rotth) Hassk (at Hart Bogor 24, 1844, Kuckenth op. cit 500

Krilinga brevifolia Routh Desce & Icon 11 | 4, f 3, 1773, FBI 6, 588; FUGP 3 : 343

An erect glabrous plant with slender, horizontal rhizorner, 15-30 cm tail. Leaves linear, creet, shorter or as long as the stem. Spikes provident tary, white Spikelets ovate-hinecolate to fanocolate, one flowered. Their plane 2 nerved on either side of the servated, non-weight keep Nuts chovate oil psoid, much faterally compressed. Common in similar localities as C kyllingia. End!

C Rabelleformis Routh Deser & Icon 42 t 12, f 2, 1773
C aiternifolius Linn subsp flabelliformis Kuekenth in Pfreich 10, 193, 1936

An erect, stout palm-like plant 60-120 cm. high Involuteral leaves 15-25, prominently nerved, much exceeding the umbel. Umbels lax, numerous crowded at the top of primary rays. Spikelets compressed, lustrous. Glumes carinate, apiculate, closely imbricate.

Native of Africa Grown as an ornamental sedge in ferneries, plant houses and near small pools of water in gardens.

Local name: Nagarmotha
Flowers and Fruits: Nov.-May
F. K. Maheshwari 584, Nicholson Gardens

C. niveus Retz Obs 5 . 12, 1788, FBI 6 . 601, FUGP 3 · 327, Blatt & McC in JBNHS, 37 : 261, 1934.

An erect, glabrous, tusted herb with a short, woody rhizome and siender, fibrous roots. Leaves nearing or exceeding the inflorescence, narrowly linear. Inflorescence a solitary head of 3-8 spikelets. Spikelets white, much compressed, linear. Giames distichous, ovate-lanceolate, close-nerved. Nuts dark brown, triquetrous, lower part of style persistent.

Uncommon on the Ridge as well as the neighbouring hilly tracts near Far.dabad on sandy or gravelly soils

Flowers and Fruits; July-Oct J. K. Maheshwari 719; 1187, Ridge

C. uncinatus Poir in Lamk Encycl 7: 247, 1806, FUGP 3: 325; Blatt

C. cuspidatus H.-B. & K. Nov. Gen & Sp. 1 ; 204, 1815; FBI, 6 ;

An erect, glabrous, tufted sedge, 10-25 cm high, with several floral

C

gh0

fiot

ne: aw

> us he

CH

br

暴口

ρſ

at se

₩

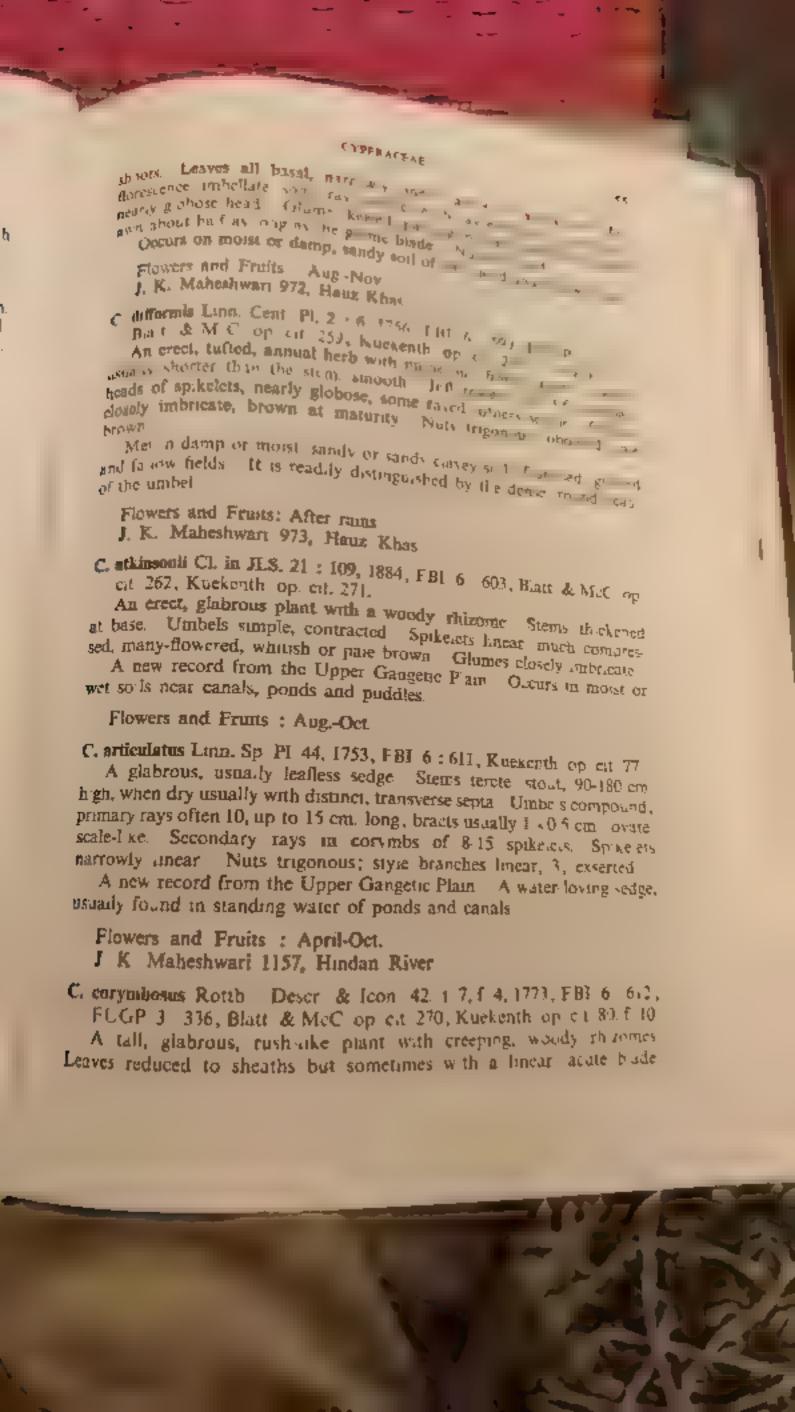
C

ħ

pi St

n

u



I mbe's for pound, primary rays slender, secondary rays terminated by spikes or cor mas of 4.16 spikelets. Glomes straw coloured, paie reduced by we or red-brown. Nots enerowly obovered

Capition in marshy places and near capals

Figwers and Fruits July-Dec

C bulbours Vahl Frem 2 342 1806 FBT 6 611, FUGP 3 : 336 An erest perennal tufted herb Bulbs contred with scale leaves Leaves borne in lower part of the stens. from 1.2-7 cm. above the bush blades a routs a pear Inflorescence with talls of sessile spikelets in a spike and forming a contracted umbel. Spikelets chestnut-bruwn Glumes many-nerved.

Common in waste and unused, dry gravelly places and in crevices

amongst stones on the Ridge

Local name : Motha Flowers and Fruits: July-Dec. J. K. Maheshwari 971, Karnal Road

C. rotundus Linn Sp. Pl 45 1753; FBI 6, 614, FUGP 3 332 Kuckenth, op. cit. 107, f. 13.

An erect, glabrous herb, up to 60 cm. high. Leaves usually shorter than the stem, linear inflorescence an umbe, of more or less condensed spikes, bracts foliar, generally three, exceeding the umbel. Spikelets pale yellow or brown, often with a reddish tinge. Glumes declirent below as hyaline wings. Nuts obovoid-ellipsoid

A common and variable weed during the rainy season in lawns unused ground and fields, growing in different types of habitats, often

becoming abundant and dominating the vegetation

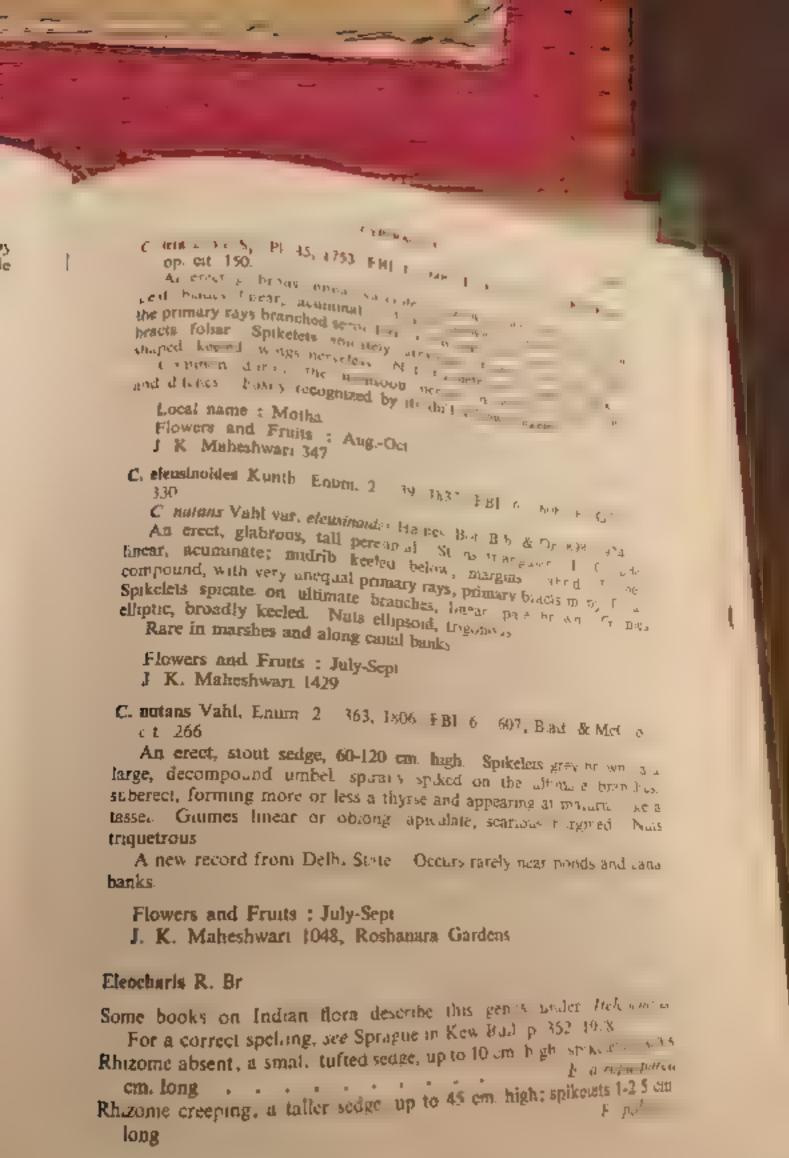
Local name : Motha Flowers and Fruits: July-Oct J. K Maheshwari 779; 1052

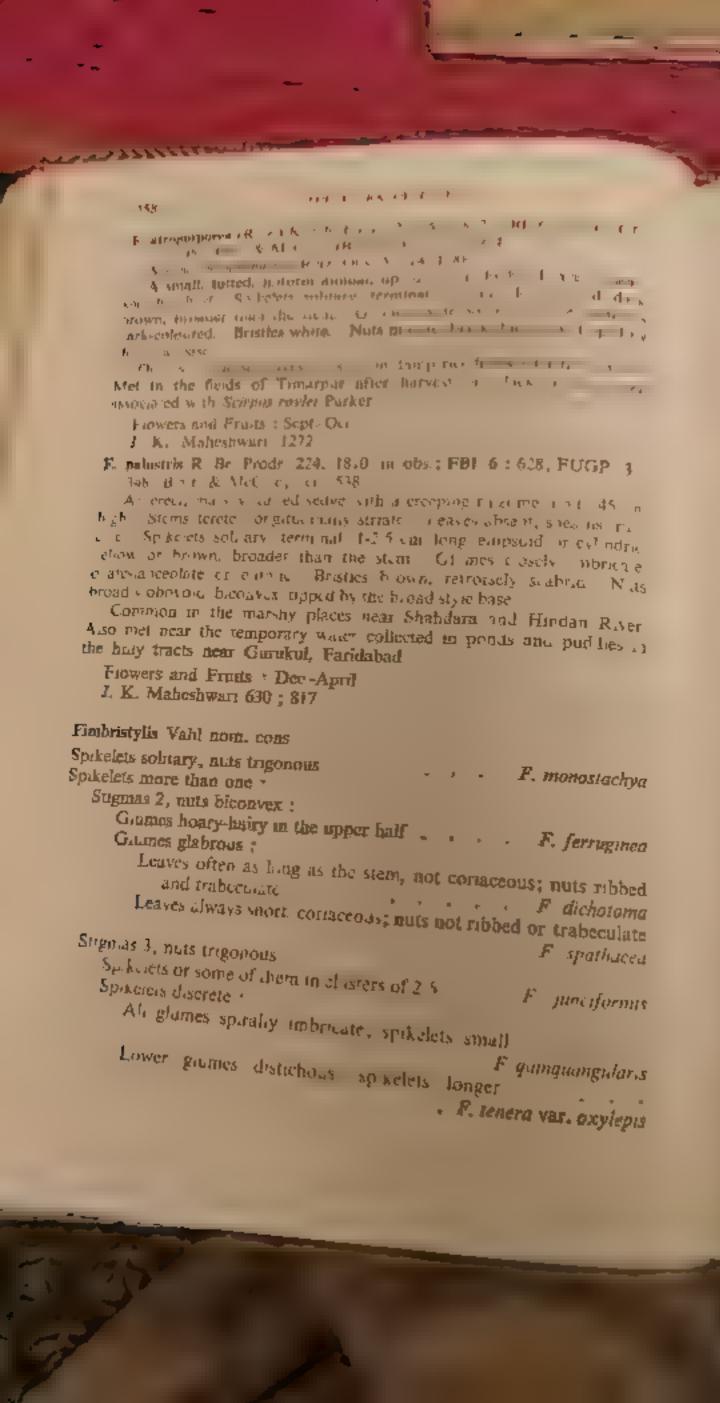
C. compressus Linn Sp. Pl. 46, 1753, FBI 6 605; FUGP 3 · 328, Blatt & McC in Jannes. 37 . 262, 1934. Kuckenth op cit 156

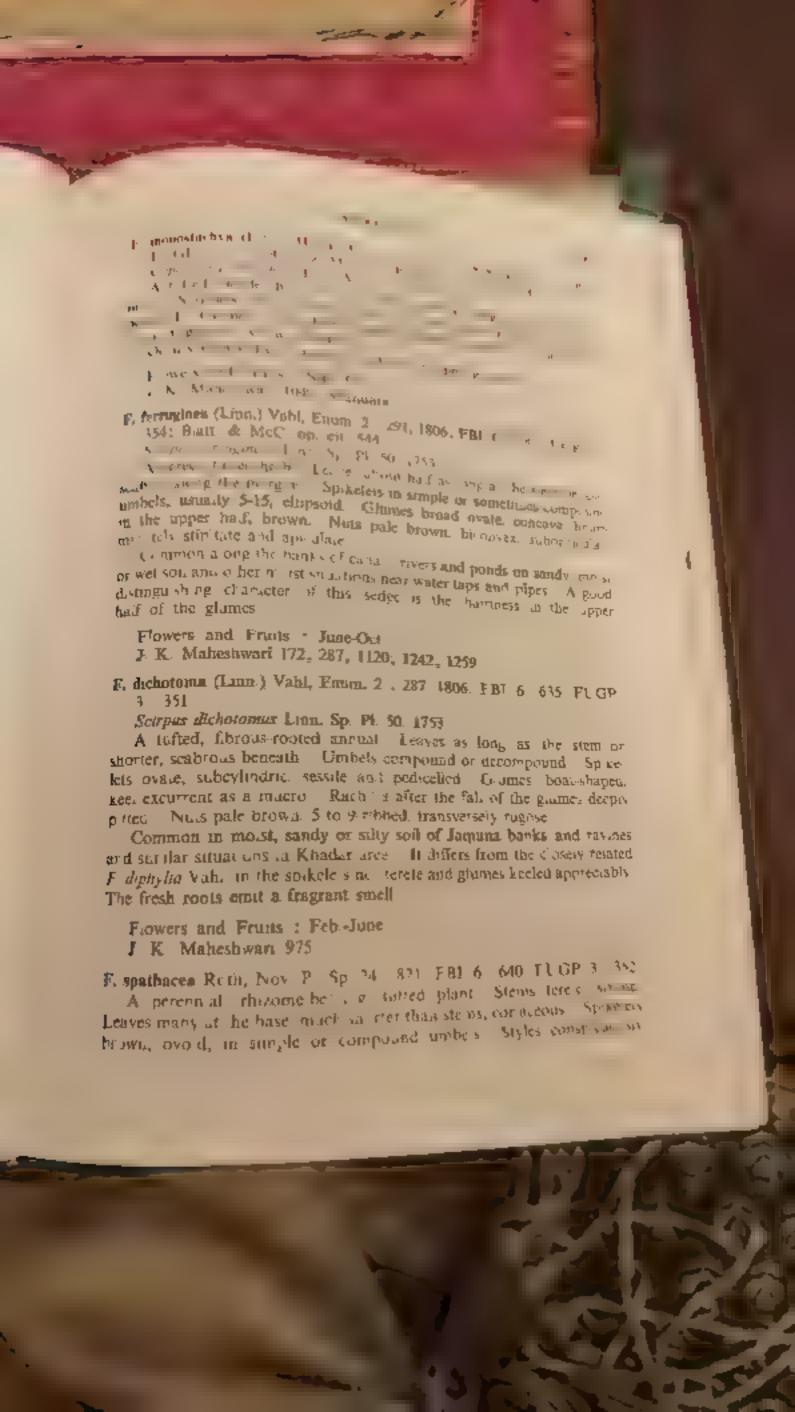
An creet herb with numerous, fine, tufted roots, the whole plant greenish or greyish-green Leaf blades narrowly linear, tapering to a fine acuminate up Inflorescence umbellate; some of the rays sessile Spikelets in condensed umbellate spikes, strongly compressed laterally Gumes green on the sides, winged. Nuts broadly triquetrous, dark brown

Common during the monsoon period on the Ridge, along streams. by roadsides, in waste places and along paths on moist, silty or sandy soil.

Local name : Mothi Flowers and Fruits : July-Oct J K Maheshwari 256; 1115







similar moist situations.

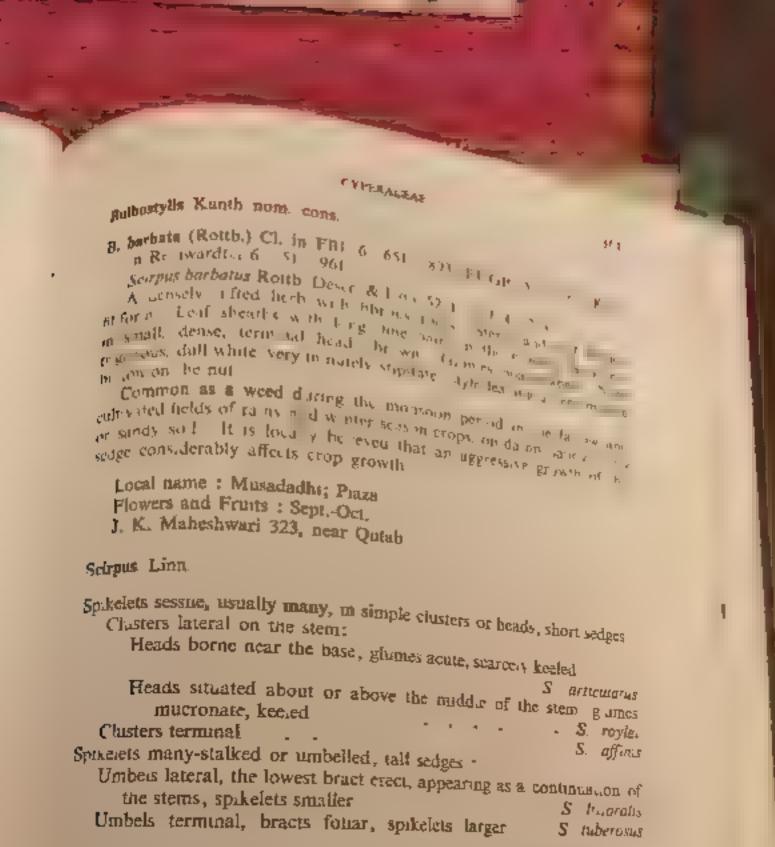
Flowers and Fruits : Aug.-Oct. J. K. Maheshwara 977

F. tenera Room & Schult var. oxylepis Cl in FB1 6 · 642, 1893

An erect, tufted plant, 15-30 cm. high. Leaves about half the length of stems. Umbels lax, subcompound, consisting of a sessile spikelet. 2-3 pedicellate spikelets and 2-3 rays with one sessile and 1 or 2 ped cerlate spikeless. Spikeless subcylindric or narrowly evoid, 5-10 × 2 mm Gumes ovate brown, keel prominent, excurrent. Rachillar areoles large, depressed Nuts obovoid, daily white or yellowish-brown, verru-

Common near canals, ponds and in fields of rainy and winter season crops on drying soil.

I lowers and Fruits . July-Oct J. K., Maheshwari 976, Najafgarh, 1262, R.dge, 1309, Vallabgarh



## S. articulatus Linn Sp Pl 47, 1753, FBI 6 656, FUGP 3 360

An amphibious, moisture-loving sedge with fibrous roots and erect, hollow, terete, Light green cuims (flat in dried specimens. Leaves appear in the juvenile stage under water and fall away before the inflorescence, leaving a membranous sheath. Spikelets paid brown in a solitary, dense, lateral head, situated often near the base. Bristles absent Nuis obovoid, triquetrous, black, apiculate.

Common in paddy fields on moist or muddy soil, near canal banks on drying flooded areas and in marshes, growing alone or with

S. roylei Parker.

Flowers and Fruits: Sept.-Oct. J. K. Maheshwari 978, Najafgarh



S. raylel (Neos) Parker in FUGP 3 361 1979 Isolepis raylel Nees in Wt Cauch 107 1834

Scopies quenquetarine Buch Ham on Book in Linnaen 36 701

,870, FBI 6 : 657

A refect often in onservited seduci 20.45 cm lists. Stoms entry significant conspict onsily to asserse set the Tent sheat is search to any Spikerets is a list search and above the public of faction. In 150 tary as east only yellowish. Glumen membranes y contact kelled by a large cross.

Common in drying paddy fields on interds or wet soil and in our sides near cards and instruction of a new rated with 5 ar realities from first which cantiers in proceed as significant and the arrest hards instally borne above the middle of the significant.

Flowers and Fruits: Sept-Oct J K Maheshwari 970, Najafgarh

5. affinis Roth in Roen & Schult Syrt 2 140, 18.7 & Nov. Pl Sp. 30, 1821; Raymond in Nat. Conad. 86 - 227, 1959

S. strobininus Roxb. Hort. Beng. 6, 1814, nom. nud., & Fl. 1nd. 1

222, 1820.

S mardimus var affinis Ct. in FB1 6 - 659, 1893, FUGP 3 363.

An erect, spongy tooted sedge with smooth, borzonta rhizomes. Stems up to 5 cm to 1, the kened at their base, sharply trigonous, leafy Leaf biades 20 × 5 mm. Bracts 1-3, unequal. Spikelets 1-5, sessile. 2 × 1 mm, light brown. Nuts lenticular, dark brown, ovate, apiculate.

Common along the banks as well as in the bed of Jamuna R ver on

wet or muddy son and near temporary ponds in the Khadar tract

Flowers and Fracts: Feb.-June J. K. Maheshwari 175; 628; 843; 1007

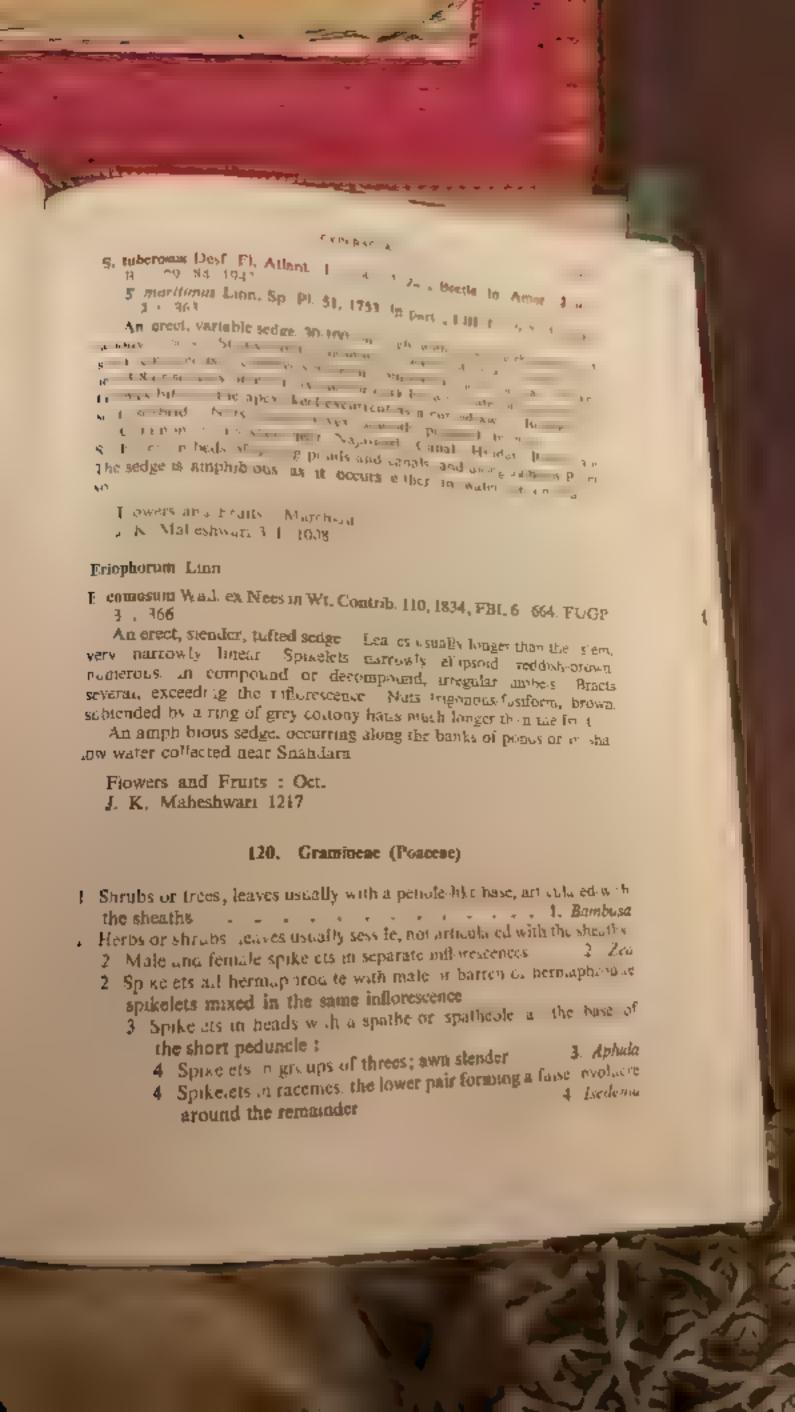
S. littoralis Schrad Fl. Germ 1 - 142, t. 5, f 7, 1806; FBI 6 659 FUGP 3 : 362

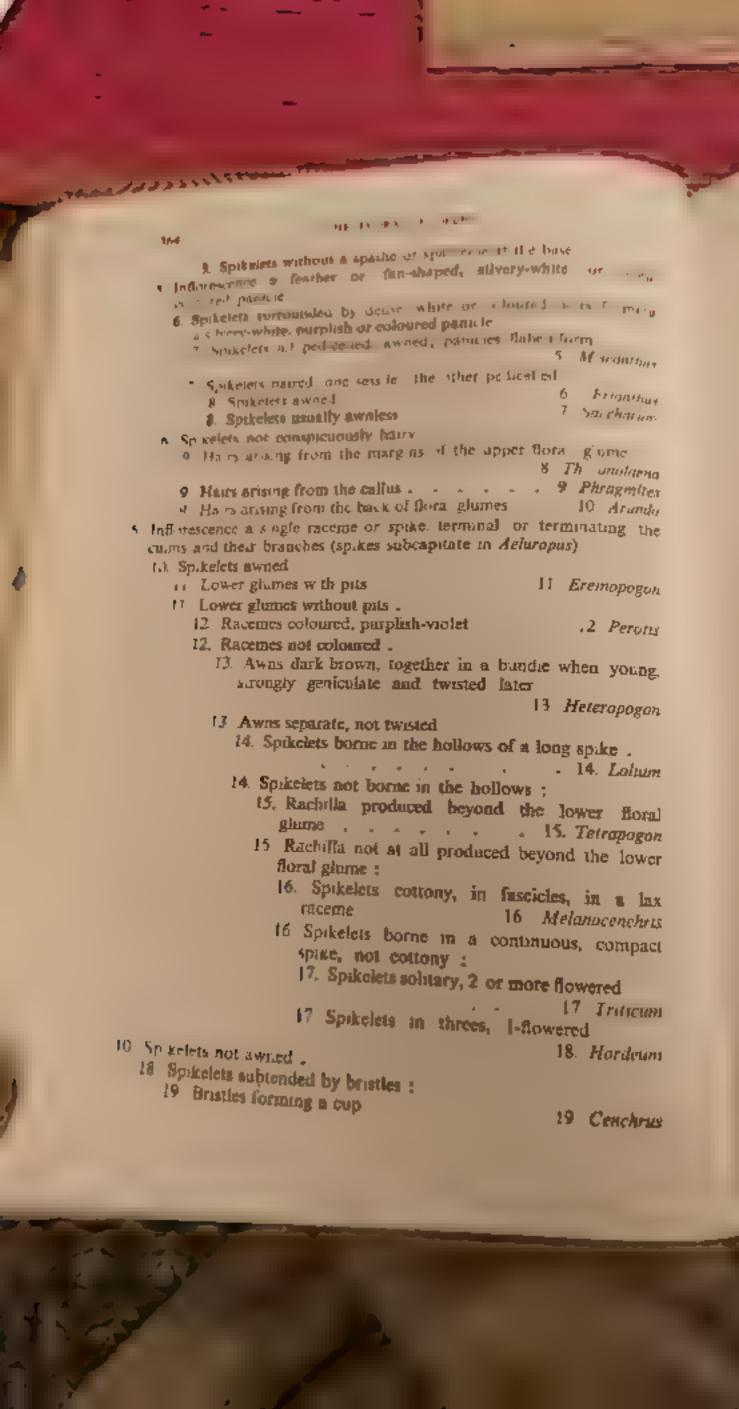
A hygrophicus, tall sedge with creeping rhizomes. Stems I m or more in tallness, terete hollow. Leaves develop under the surface of water and fail before the appearance of aerial inflorescence. Spixelets reddish-brown, in lax, subcorymbose or paniculate umbels, borne laterally near the apex. Giumes notched at the tip, mucronate by the excurrent keel. Bristies soft, linear. Nuts. broad. obovoid. biconvex, dul.

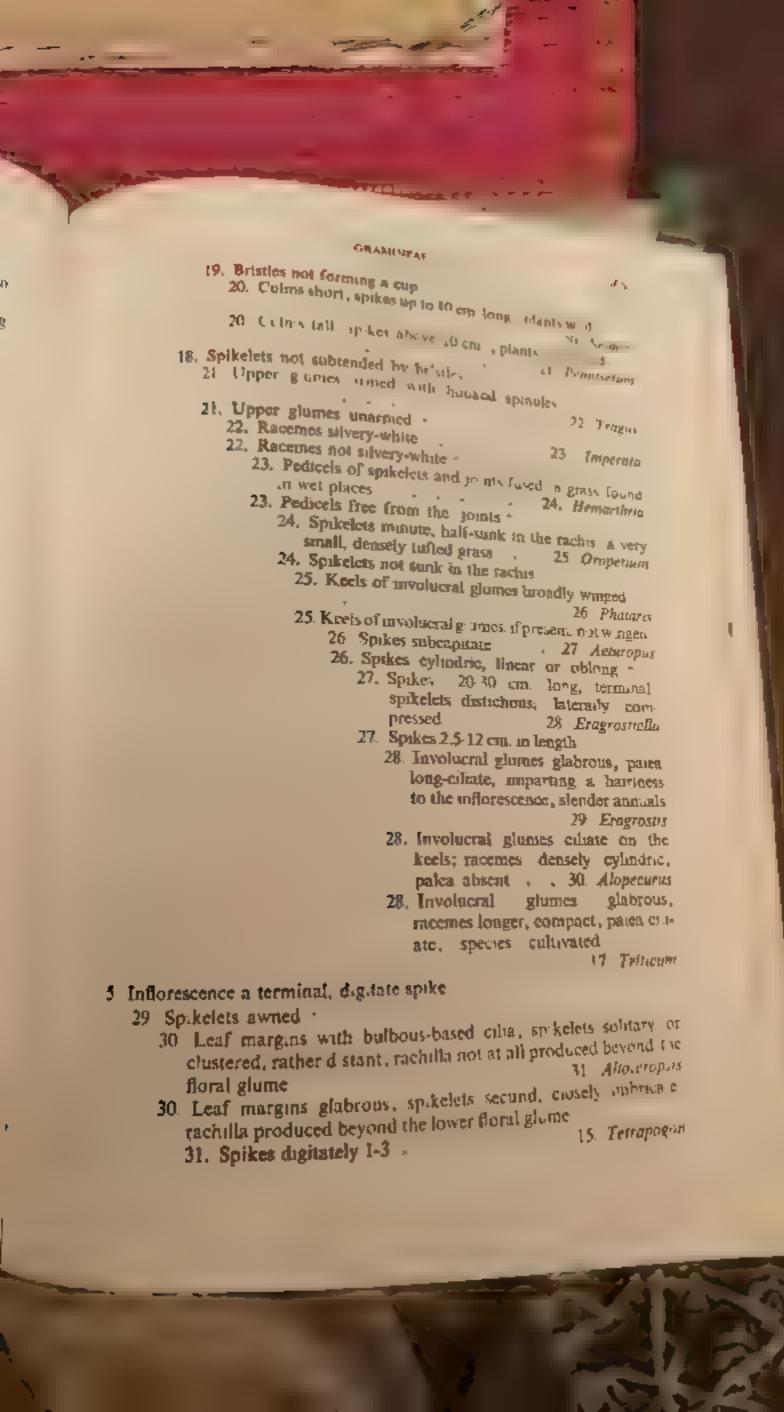
Common in or along the Najafgath Canal and in the temporary pends near Shahdara. The plants appear as if they grow in rows due to the long, creeping rhizomes.

Flowers and Fruits': Sept.-Nov I K Maheshwari 750, 794



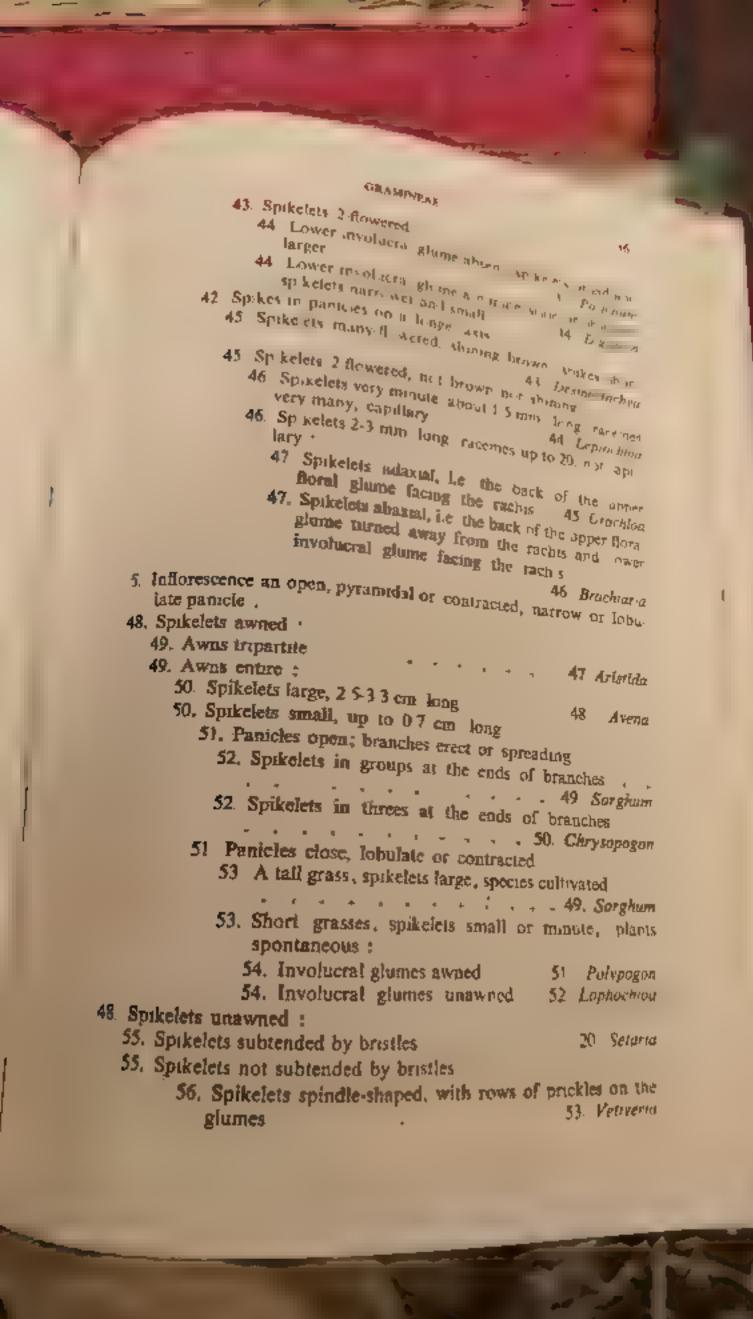






31 Spikes dig tate, more than 3	32 Chloris
29 Sp kelets annwined	
11 Pacemes usually 2 spikerest brown couplie, un	Hehous
	33 Paspalum
12 Racemes usual v more than 2	
31 Spikes long spikerets plano-convex, 2 flower	ed, Parrow y
appressed; infler grasses	34 Digitaria
31 Spikes short, spikelets innecolate, I-flowe	rou, sle ider
grasacs	35 Cynadan
33 Spikes long or short, spikelets internils comp	ressed, more
than 2-flowered :	20 -
34. Rachis ending in a spikelet	30 Eleusine
34. Ruchis ending in a mucro 37. De	ictyloctentum
5 Inflavorance of lane as short manner or seed	
Inflorescence of long or short racomes or spicifo	rm racomes
arranged on a long or short central axis (sometimes S Dichonthium)	obligitate in
35 Racemes or spike-like racemes up to 2 cm long, point:	ng upwards
36. Spikeiets glabrous, polished, globose, turning year	
36 Systematic house, drill amount	Paspalidium
36. Spikelets hairy, dull green 39	Echinochloa
35 Racemes or spike-like racemes longer than 2 cm.,	often much
"" to " " " " " " " " " " " " " " " " "	clets many-
TO WASHING OF GAME .	
37. Spikelets awned:	
38. Lower involucial gluine awned:	
19 Leaves ovait-langeolate to langeolate have	
or rounded, spikes lax, long or short and na-	constructed
or not	rrow, sticky
	<b>Oplismenus</b>
39. Leaves linear; base not constricted or roun dense, shorter and broader not still	ided, spikes
OF CHARLE	
38 Lower involucial objects and 39.	Echinochlag
40. Panicles with a long, primary axis; spikes is broader, dense.	three and the
broader, dense.  40. Panicles subdigitate or mith.	E-Library and
40. Panicles subdigitate or mich	<i>cennochioa</i>
40. Panicles subdigitate or with a short, pri	mary axis.
41 Lower tanders 1	
4) Lower involucial glumes with pits	
41 Lower involucial office with and 41. B	bashus ut i
41 Lower involucial glumes without pits  37. Spikelets not award:  41. E	1.4
- Pikelele trot assessed	"ICRanthium
92 Spikes digitate at his	
42 Spikes digitate, subdigitate or with a short prim 43 Spikelets many-flowered	Hell puls
The tree many-nowered .	ary axis .
	O. P. leutina





56. Spikelets not prockly 57. Spikelets 1 to 2-flowered

58 Spikerets paired, one sess to the other per celled

58. Spikelets all alike, sessile or ped collect.

59. Spikelets B-12 imm long, species cultivated.

59. Spikolets below 5 mm, in length xpecies

60. A swollen annular callus present at the base of the spikelet

60 No swotten annular ca as presen at the base of the spikelet

61 Spikelets minute, about 15 mm long 62. Spikelets distributed all over the branches; grains closely invested by the game or palea

62. Spikelets crowded in upper parts of branches which are bare below; grains free

61, Spikelets not less than 2 min

63. Racemes usually 2-3 cm. long, dense; spikelets green or dark purple; glumes hispidulous

63. Racemes long, lax; apikelets green; glumes glabrous

57. Spikelets more than 2-flowered: 58. Panicum

64. Floral glumes 1 to 3-nerved :

65. Short grasses; upper involucral glume 3-nerved

65. Tall grasses; upper involucral glume 5-nerved;
species planted 59. Halopyrum
60. Poa

# 1. Bambusa Schreb, nom, cons

Bambusa sp.

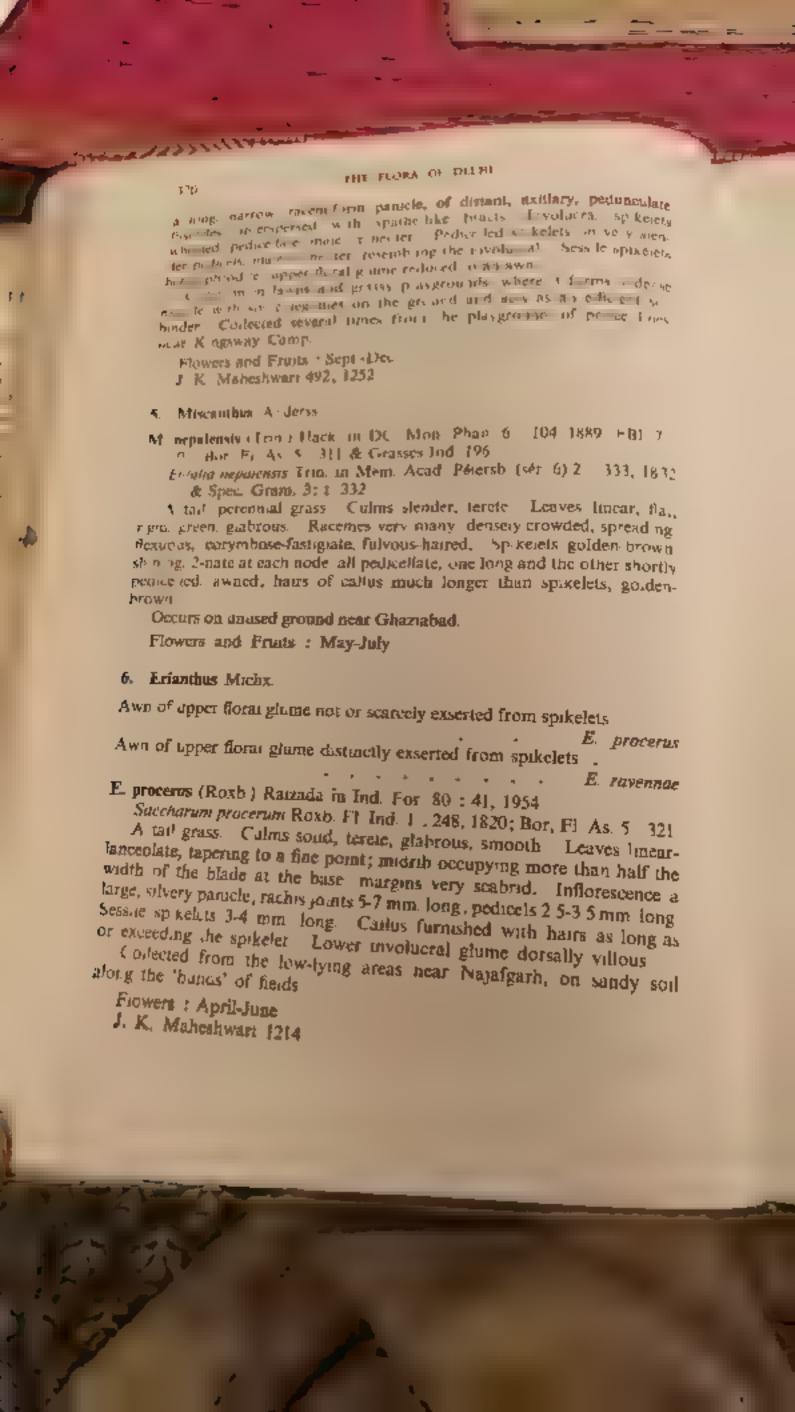
A shrubby or arborescent plant with stout rootstocks and forming dense clumps. Culms terete, green and shining when young, becoming golden-yellow with age. Leaves articulated on the sheath, flat, many-

PAME OF A 124 Cult vated to gardens. Liowering and 177 from Tughlak Rund areas. 2. Zea Linn rd A. mays Linn Sp. Pl. 971, 1753, Dull A. 1 4 An erect, robust, monoce , c ter broad arceroe pe Mer your first spale or become one seem of lower floret male or barren, upper floret to be anthory, enclosed in the sheath of the age and are idea. Snikelets sessile, in longitudinal course Commission of the sessile course Commission of the Custivated as a rail y season, rop in villages. Local name : Makk-Flowers and Fruits : Winter scason K. Maheshwari 10. 3. Apluda Litin. A. aristata L.nn. Cent. Pl. 2 : 7, 1756 Duthic. Fed ( r 44 1 19 Bir A. prutica I mp. var. aristata Pilger in Engl. & Pranta, Nat Pfam A. varia Hack, var. aristata Hack, in DC Mon Phan 6 196, 1889 FBI 7 - 150, Blatt & McC. Bomb Gr 29, 1 20 An erect, leafy, percennal grass, branching from the base Comes many-noded, smooth, glabrous Leaves up to 30 < 0 5-1 5 cm linearlanceolate, long attenuate towards the base, almost petiolate tapening above to a fine, setaceous point, midn'b white above. Inflorescence a leafy paniete of very many, solitary, simple racemes or spikes, each coclosed in a spathe. Spikelets in trios, one sessile, two pedice ted one of the pedicelled is reduced to a flat pedicel the other is male. Session spikelet hermaphrodite; upper floral glume hyaline, eleft had way down, awned in the cleft. Common in hedges and amongst bushes of gardens and waste places Flowers and Fruits: Sept.-Fob. J K. Maheshwari 493, near Kingsway Camp

4. Isellema Anderss.

I. laxum Hack, in DC Mon Phan 6 682, 1889, Dach e, eg. c t. 43 FBI, 7; 218, Blatt & McC. Bomb Gr. 313, Bor, Grasses I id. 188. An erect, ascending or often prostrate, perennial grass. Leaves linear green of purplish, glabrous, margins scabild, sheaths ax. Inflorescence





E. ravennae (Lann.) Scauv, Agrost 14 1812, PBI 7 Kew Bull 208 1907 Duble, Gr. N.W. Ind 15 & 1 of Car 76 Bor Grasses Ind 151 Andropogon ravennas I pp Sp pt 1481 1263 Saccharum ravennae Linn, Syst 88, 1774

A large, tufted perennal, up to 4 m at ( m) a a a an an analysished Leaves variable in length means a om a remarks margin which influencement of the property greytsh or purpose Junts and pedicels of the rategies one and with thicke ied tips. Spikelets paired award one sess le accitte other

pedicelate, both a sec callus hairs purplish or brown sh

Common on the ground along radway fines and canal banks on narshes, on thrused ground near temporary pends and diches and along the raised embankments around fields, et. It is especially me in the trans-Jamuna area near Shahdara and Hindan River where I grows in dense tafts. The fibre is used in making charts, 'muddas 'chappars' or temporary house roofs and ropes

Local name : Moonj; Sarkara Flowers and Froits : Sept.-Jan. J K, Maheshwari 510, 515; 549

#### 7. Saccharum Lind.

Stems silky below the panicle Stems gasbrous below the particle

5 spuntaneum S officinarion

S. spontaneum Linn Mant 183, 1771; Duthie, Gr. N.W. Ind. 15, Indig. Fod Gr 57 & Fod, Gr 25; FBI 7: 118, Blatt & McC Bomb Gr 45, Bor, Grasses Ind 214.

A very variable, tall, percanial, densely tufted grass. Leaves very long, narrow-linear acuminate, corraceous. Flowering panieles. 5-60 -5-10 cm, conical or lanceolate to oblong, branches whosled, spreading or sughtly ascending, with the calfus hairs closely appressed to the branches, peduncle softly silky just below the panicle. Spikelets paired, one pedicellate, the other sessile, I-flowered, hermaphrodite

A very permicious grass, common in unused ground, fallow fields, near canals, ponds and marshy places, and along areas on both sides of rarlway lines. It is eradicated by burning. The culms are extensively used in making 'chicks'. The foliage is used against frost for protect on

of vegetables growing in fields.

Local name : Kans ; Kana; Sarkanda Flowers and Fruits : Sept.-Dec J. K. Maheshwari 420: 1253

S. officinarum Linn, Sp. Pl. 54, 1753, FBI 7 118, Blatt & McC op cit, 46.



An erect, tall, many-noded grass glabrous or with appressed hairs below the panicle, waxy at least below the nodes. Leaves rigid, linear lanceolate, acumulate, spreadury desciping at the tip. Panicles pyramical, very large, dense, spreading printery branches verticillate or sent verticillate, fillform. Spikelets lanceolate, surrounded by dense, sirky write hairs.

Custivated for its juncy culture

Local name : ikh J. K. Maheshwari, cultivated

#### 8. Thysanolaeua Necs

T. maxima (Roxb.) Kuntze Rev. Cich. 794, 189. Bor. Fl. As. 5, 176.

Agrostis maxima Roxb. Fl. Ind. 1 \* 319, 1820.

This sanotaena agrostis. Nees in Ediab. N. Phil. Jour. 18, 180, 1835.

FBI, 7; 61

T. procesa Mez in Bot. Archiv 1 27, 1922; Blatt. & McC op-

A perennal, tal, bandsome grass. 2-3.5 m ta. 1. Culms rounded poushed Leaves large broad lanceolate many nerved. 30-60 × 5-10 cm Pancles large soft, glabrous, of very numerous, erect or subtrect, fillform branches which divide and subdivide bearing numerous minute spikeless. Spikelets acuminate, pedicellate. Involucial glumes subequal, hyanne. Lower floral glume lanceolate, empty, upper hermaphrodite, ovate, chate with long, erect, white hairs. Grams very minute.

Planted as an ornamental grass in bedges of gardens

Flowers and Fruits: Nov Feb.

J. K. Maheshwari 795, Nicholson Gardens

#### 9. Phragmites Trus.

P. maxima (Forsk.) Hiatt & McC Bomb Gr 202, 1935
Arundo maxima Forsk. Fl. Acgypt.-Arab. 24, 1775
Phragmites karka Tr.a. ex Steud. Nom 2 324, 1841, Bor, Cr UP 179

Arundo phragmites Linn, Sp. Pl. 81, 1753.

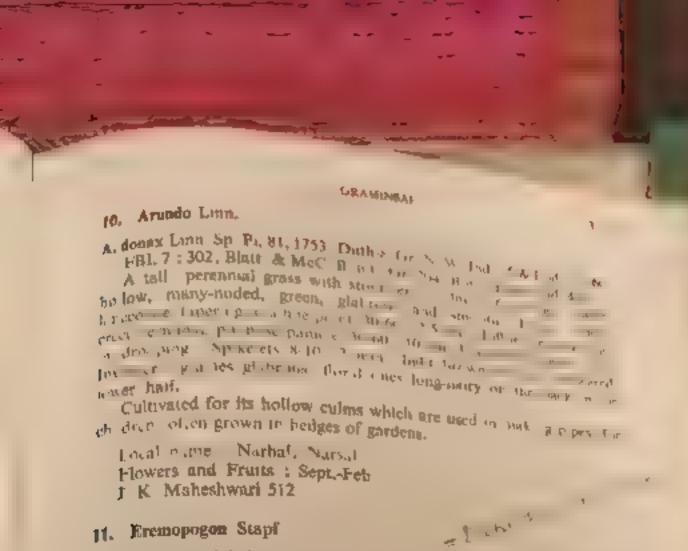
A tail, erect perennial, up to 3 m tail. Culms hollow, terete, smooth Leaves linear, acum nate, corraceous, bifarious. Panicles large, erect, decompound, branches finform, scaberulous. Spikelets several-flowered hermaphrodite, callus densely clothed with long, silky hairs. Clumes glabrous. Caryopsis free, oblong.

Common in wet places near the banks of Okhla Lake, Hindan River

and water ponds near Shahdara.

Flowers and Prints: Winter season J. K. Maheshwari 572





E. strictus (Roxb.) A. Camus in Ann Soc Linn. Ly n (n.s.) 68 208. 1922, Raizana in Ind For 80 45, 1954. Andropogon strictus Roxb. Hort. Beng 82, 1814 new nud. & Fl Ind 265, 1820

An erect or decumbent, tufted, very slender grass, up to 60 cm tall Stems gen culately ascending, lower portion leafy hodes bearded Leaves linear, up to 10 cm, long. Spikes solitary, about 5 cm, long, on long peduncles Toints and pedicels with long, silky hairs. Spikelets paired, the sessile one bisexual, the pedicelled one maie both with a circular put on the back of lower involucial glumes. Upper floral glume of the session spikelets passing into a geniculate awn. Pedicelled spikelets awn ess.

A sporad e grass occurring in the fully tracts. Common on uneven plateaux near Mehrault in dry, gravelly reddish-brown soils and in the neighbourhood of New Cantonment.

Local name : Zarga Flowers and Fruits : July-Oct. J. K., Maneshwari 1154, 1169, near Gurukul (Fandabad)

12. Perotis Ait.

P. Indica (Linn.) Kuntze, Rev. Gen 2 · 787, 1891, Blatt & McC Bomb, Gr. 220, t. 147; Bor, Grasses Ind. 611 Anthoxanthum indicum Linn. Sp. Pl 28, 1753 Perotis latifolia Ait. Hort Kew 1 85, 1789, FB1 7 98 An annual, rufted grass with geniculate subspect, ascending glabrous stems term nating in inflorescences. Leaves short, 3.5 x 0.7-1 cm, ovute



and the first a behalf ampresional base, gla scous, Racemet slender or so he face wenter peoplesh sucles. Spikeleta marrowly linear there ed I volucte give long twied Grains almost cylin15.

1,0

 $\Omega$ 

the month wet grave is unused places near temporary ponds and . they can anusce ground near Smallenth, it grows abundantly of sandy, dump situations

Flowers and Fronts : July-Oct I K Maheshwatt 285, near Okhla

#### 13. Heternpogon Pers.

Il contortus (Line) Roem & Scholt Syst 2 836, 18 7 Duthie Gr N.W. 14d 19 & Fod Gr. 32 t. 19, Blatt & McC. Be ub. Cr. 109,

t. 71 Bot, Grasses Ind. 163

Andropogon conforms L on. Sp. Pt. 1045, 1753, FBJ, 7, 199

An erect or decumbent, tufted stender perennial, about I in high Leaves brear, flat. Influrescence a single, terminal raceme or more often several flowering branches. Spikelets closely imbricate, the lower ones awaless, male or neuter, the upper ones long-award, female. Sessile, female spikelets hisp dil apper floral giume reduced to an awn. Pedice late sp keicts hispid at the back with long, bulbous based ha rs

Common on the Ridge and adjacent hilly tracts near Faridabad and Mehraua. It is a very troublesome grass on account of the awas which get twisted together like the strands of a rope. It serves as a good fodder

grass if used before flowcong.

Local name : Daabsuli; Surbala Frowers and Fruits: Oct Dec. J. K. Maheshwari 1040.

#### Lolium Lann.

L. temulentum Linn. Sp. Pl. 83, 1753; Bor, Fl. As. 5 · 66 & Grasses

An erect annual, 30-,00 cm high. Culms infled, solitary, swollen at the nodes. Leaves scabrous, linear, acute. Spikes erect, straight, with up to 30 spikelets. Spikelets 5 to 10 flowered. Florets all hermaphrodie Lower involucial glame absent or hidden in the hollows of the continuous axis. Floral glumes elliptic-oblong, S-nerved, awn subterm cal, straight. Paice 2 keeled. Grains elaptic-oblong, grooved in

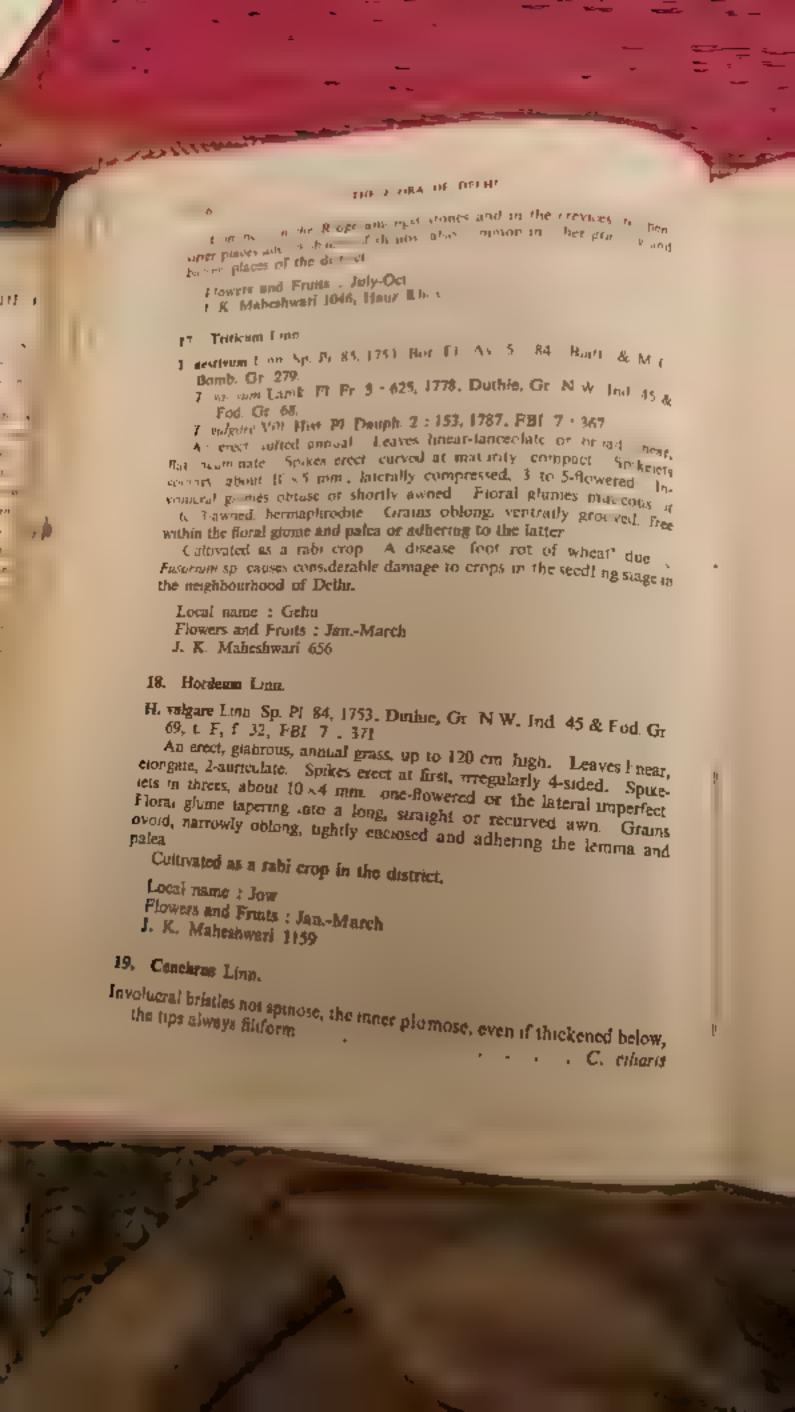
Common as a weed in mo st places or comes mixed up in the fie ds of wheat, barley, etc. The grains are said to be poisonous

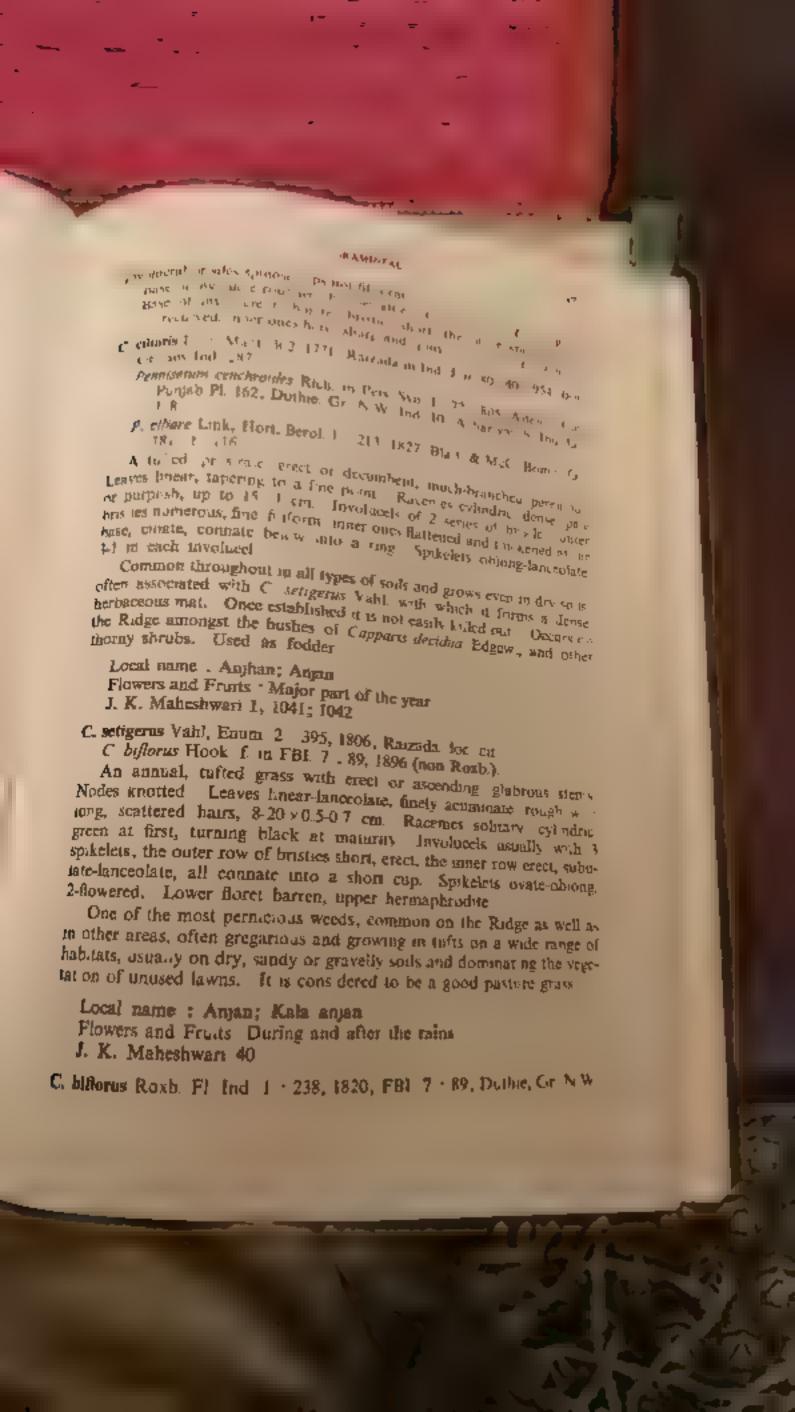
Flowers and Prints Oct -Feb.

J K Maheshwar, 1062



er, GRAMINBAT 15. Tetrapogon Desf. Br. Lower florar glame bream a conclusion η., L. wer flore, glame ovon hirsute at over T tenellus (Koen ex R ch ) Ch in You h Box R in X pois Rairoda in Inc. hor 80 to 354 B r Ch in Ch in Solitoria tenello Koen, ex R ish 11 r Beep 9 X 11 n in A ιd η Fi. Ind. I : 330, 1820 1 Br 7 200, Action of S Link An erect, weak against branching from the base I caves one of Innecessate act mounte, flaceted Spakes usually solve y erections a second to a single, 7 ×4 mm befareous, 3 to 4 award Involuced prome season apper one's for ly awned. Grumes of hermaphrod, e flore he ad near proposite, sweed, paleate, the next or second floral glume species in similar; the other stall smaller and sweed. Grains obling for a se-Common on the Ridge as well as in the neighbour of and saing macts amongst the shrubs and in depressed places on grave by so Flowers and Prints ! July Oct. J. K Maheshwari 340, Hauz Khas f. villosus Desf. Fl. Atlant. 2: 389, c. 255, 1799 Dutine, Gr. N W Ind 33 & Fed. Gr 55, t 68 Bor, Grasses and 435 Chioris villosa Pers. Syn. I \* 87, 1805, Anches. Cat. Punjab 1º 61 FBI. 7: 291; Blatt. & McC Bomb. Gr 254 A stout, thatted perennial with a woody base, 15-25 cm tall. Leaves bnear, acute, flat, rigid; ) gule obscure Spikes 1-3, erect Spikesers obconic, with 4 unequal awas. Involucial glumes award, upper one 2-toothed at the tip Glumes of the hermaphrodite floret broad ovace or suborbicular, hirsate all over with long, silky hairs, the next glumes barrea, hirsute, the next small, the last reduced to an awa Rare Melanoceochris Nees M. Jacquemontii Janb. & Spach. III. Pl. Or. 4 36, t. 325, .851, Santapaq in RBSI, 16(1): 358, 1953; Bor, Grasses Ind. 473. M. royleana Nees ex Steud. Syn. Pl. Glum 218, 1854 Duthie, Cr. N.W Ind. 33 & Fod. Gr. 54, t. 67. Gracilea rayleana Hook, f. in FBI 7 284, 1896, Blatt & McC Bumb Gr. 248. A small, slender, tufted annual, up to 15 cm tail, spreading or ascending. Leaves linear-lanced ate. fileform, acutely pointed, margins distantly en ate. Inflorescence up to 6 cm. long, of fascicles of cottons sp kelets; rachis flexuous. Awns of involucral glumes longer than the games, awd of floral game short. Grains oblong, brownish. Upper floral glume 3-toothed at the apex, paleate





Ind 9 , Achanyar, op ed 121 ; Blatt, & McC. Bomb, Gr. 185, (

118 Hor Grasses Ind. 287, o has a to De fe Unt Hort World 1818 4 1939 & in Lunnaea

13 cm Benche 03 1839 FEE 7 90 A car repend their recenting simple or branching grass. Leaves nee ite thie vacuumate. Racemes 6-12 cm long smilary cylin-ric . ness ? o micred brister thick fame vice subclue erec tors a fame ted the object short spreading or reflexed the toner of with and proposes. Carregula avoid abling pale rightest

Company is a critical dry soil of waste ground in seed he is, etthe met along canal banks or in shallow water where it grows partly

hmerged. The young plants are used as fodder

Local name . Chirchitti: Anjhun; Bhurst Flowers and Fruits: July-Oct I K Maheshwari 313, near Okhla

#### 20. Setaria Benay, nom. cons.

Bristles retrorsely barbellate ... Bristies antiforsely barbellate :

Upper involucial glume as long as the upper floral glume, the latter I pper involucial glume shorter than the apper lemma, the latter

cugose ... Parieles interrupted, narrow, lobed S. tomentosa

Panicies spicaform, continuous, cylindric

Sp kelets 3 mm, long upper floral glume broad dorsally strongly curved on the back and slightly keeled apwards

Sp kelets ? 25 mm. long; upper floral glume narrow, dorsally gently curved and not at all keeled S pallidifusca

S. verticillata (L.nn.) Beauv Agrost, 51, 1812, Aitchis op cit, 162, Dathie, Gr NW Ind 9, FBI 7 - 80, Blatt. & McC op cit 174, Bor, Grasses Ind. 365.

Panteum verticillatum Linn. Sp. Pl 82, 1762.

An annual grass. Culms creet ascending, branching from the base, with a conspicuous channel on one side variable in length. Leaves intear or linear-fanceolate, tapering to an acute point, 15-25 x 1-2 cm. Pan cles spike-like erect, straight or curved, cylindric or oblong Brsiles rough, one or more with reverse barbs or teeth. Spikelets ellipsoidal. Lower floret sterele; upper one hermaphrodite, elliptic-obiong. plane-convex, coriaccous. Stigmas purple.

Common on the Ridge as well as in other parts, growing amongst the shrubs in shady, most areas



GRAMISTA Local name Lapton, Local non- Local name of the state of the st g. viridis (Linn.) Heauv. Agrost. 51 17g., 3. f 3 1g 2, Bor f An Pameum writes being it ascending annual brand out to he he he he Jeaves linear-innecolate, tapering to a five per fine he had a linear to the manner of the contract of the con per linear-monte an erect oble ng or linear-cy leden of ke, 2-5 vo 5 cm. greensh. Spikelets elliptic deciduous. Grains broad oniptic

Flowers and Fruits : Oct.-Feb. J. K. Maheshwari 230, Shahdara

S. tomentoen (Roxb.) Kunth, Rév Gram 1 47, 829 Ra za la mind Panicum tomentosum Roxb F1 Ind 1 303 1820 Setaria intermedia Room & Schult Syst 2 489 18 7 FBI 2 79

A loosely tufted annual. Culms geniculately ascend ig glabinus. asparaly branching from base. Leaves incar or narrowly ancecute tapering to a fine point, thin flaccid 3-15 + 0 4-1 ? cm Panicles anear to narrowly lanceolate, lax interrupted, 4 10 × 1-2 cm the upper branches reduced to subsessue clasters or solitary spikelers supported by a bristic Sp keiets about 2 × 1 5 mm ovate to elliptic I pper floret fertile, flora giame boat-shaped, prominently transversely winkled, paleate

Common in dried compound of bungalows and gardens as well as a most localities near canals ponds and ditches, often growing in abun-

Flowers and Fruits: June-Feb J. K. Maheshwari 831; 1210

S. glauca (Linn ) Beaux Agrost 51, 1812, Attchis. op. cit. 162, Duthie, Gr. N.W. Ind. 8; FBI. 7: 78, in part Panieum glaucum Linn. Sp. Pl. 56, 1753.

A tuffed, annual grass, up to 150 cm, high Culms simple or branthed, erect or ascending. Leaves linear-lanceolate, tapering to a fine point. Racemes spiciform, erect, dense, cylindrie, variable in length, yellowish at maturity Bristies 6-12 Spikelets 3 x 1.5 mm, broadly oblong or elliptic, 2-flowered, lower male or barren, upper hermaphrod te fertile florets marked with numerous transverse ridges

Common in cultivated soils and waste places, growing in tufts, li is found in wide variety of habitats. The cattle are fond of this grass and it is considered to be a good fodder

Local name : Bandarighas Figure 5 and Fracts May Sept t & Majestinae 5 133 304

S. pullidefesco Stapf & C. E. Habb in Kes Bart 250 1930 B. T. A.

1 291 & Grasses Ind. 363 An arrive to od site of grass usually \$6.60 an high Louis, near, long-tapering to a line point. Spikes elect dense at a branches reduced to involucial bristles, supporting a viltage perfect spacelet. Spikelets 2,25 cm. long Common in wet situations near ponds, dileties, etc. It close y resem

nex 8' glaues Beauv, from which it is difficult to separate

Flowers and Fruits : Aug.-Oct

#### 21. Ponnigetum Rich

P typholdes (Barm f) Stapl & C E Hubb to Kew Ball 27 1931 Bir T As. 5 297 & Grasses Ind. 150.

Amprecarus typhoides Burm. f. Ft. Ind. 27, 1768.

Peranserum cyphaideam Rich, in Pers. Syn. 1 - 72, 1805, in part; FBI 7.82

A full erect stout annual up to 3 m high Leaves 5-60 1-4 cm onear to mear-fanceolase. Paricles spike-like, cyandric, very dense naches closely beset with the staiked, persistent involucies involucies of numerous, et ate bustles. Spikelets deciduous, oblong. Lower floret male or barren, upper hermiphrodite. Caryopsis obovoid or obevoid-chipsoid, smooth, free

Cultivated for its grain.

Local mine : Bajra

Flowers and Fruits: Sept-Oct.

J K Maheshwam 1458

### 22. Tragus Hall, nom. cons.

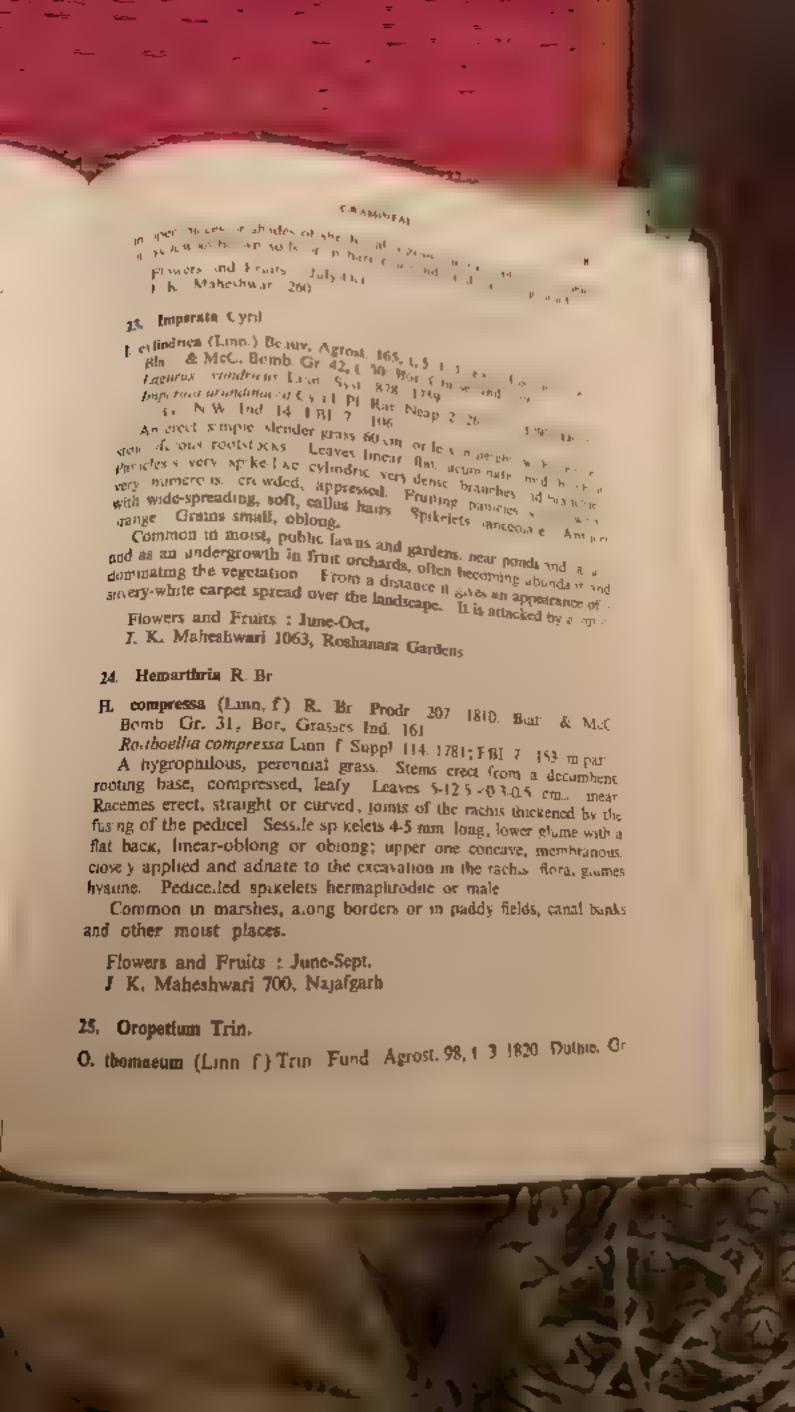
T. bifforus (Roxb.) Schuft, Mant. 2: 305, 1824, Bor, Fl. As. 5 162. Lappago biflera Roxb. Fl. Ind 1 . 284, 1820.

Tragus racemasus Hook, f. in FBI, 7, 97, 1896 (non Scop.1777).

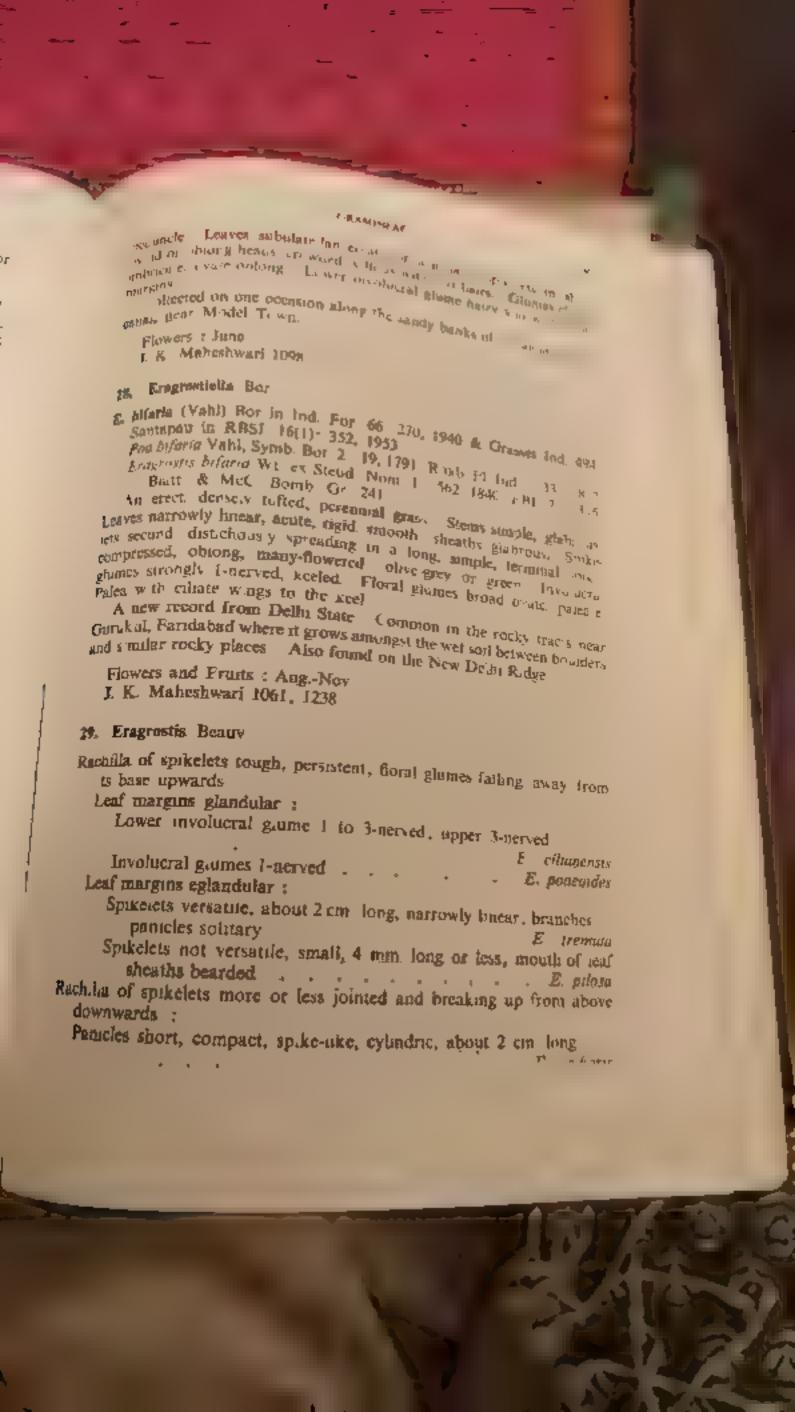
A tufted, prostrate, ascending or erect grass, up to 15 cm. tall, simple or branching, leafy below. Leaves unear-lanceolate, rigid, with pectinate y chare margins. Racemes spike-like, solitary, terminal, 5.07 cm Spikelets in groups of two, facing each other and appearing like a single spikelet with two, equal, echinate glumes, 1-flowered, 5 x 2 mm. Upper involueral glume with hooked spines along the ribs. Grains linear-obling,

Common on the Ridge in tofts on gravelly soils or amongst stones,

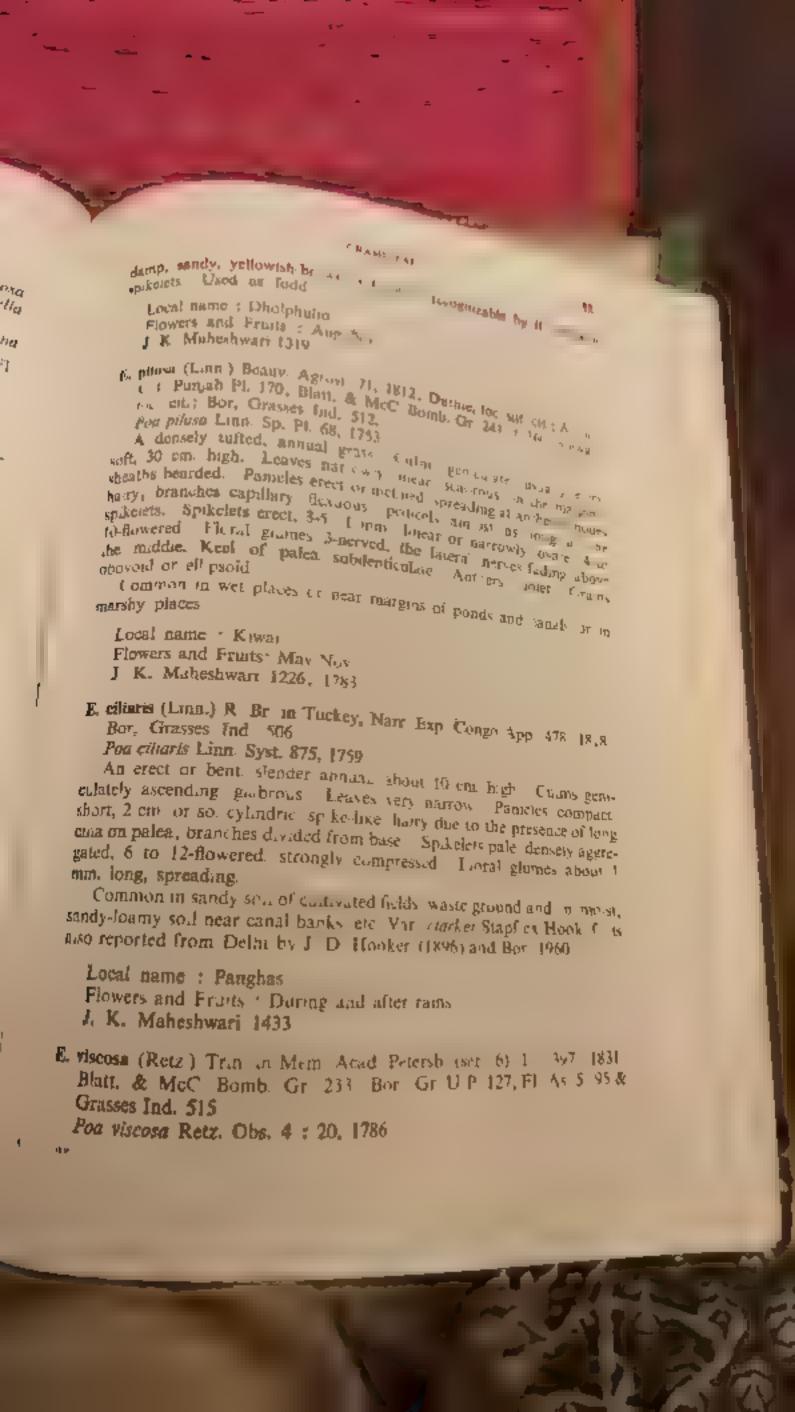




fat a cry or or it N. W. Lie. 45 PRE 1 The Blatt & McC Bomb. Gr. 247; Box I want a telling of S n. In Samuel Linn F. Suppl 105, 1761 As a new or offered annual prince. S.B con. tall. R. at they are I see to care of any aste more presente strate des the property distances stages ralply a Ever se kelets I dowered but repersed a de access n at profes you as wer as abundant in the Ridge a fine ja and he will all e p he to solon per al. It is a propert grass or fee praye y seor he Rige and at and experially in crevices of rocks in Ir dyes the news west on the ners of Recent up and tree is ne dense they on stan. As he's a sees up Riving spicies leaving book patches on he is great a met in a fruit og state either de me or a and ared were . In a transpir Fred English name : Rock grass Flowers and Fruits: July-Sept J. K. Maheshwari 1038 26. Phalaris Linn P minor Retz Obs 3 8 1783, Duthie, Gr NW Ind 25, Auch's Car Punjah Pl. 158; FBI 1: 221, Bor, Grasses Ind 616. An erect or decumbent annual. Culms branched, nodes swollen-Leaves garbrous, finely pointed, linear-fanceolate, 15-25 = 0.7 1.2 cm Particles spike-tike, contracted, cylindric in outline, erect, 13>15 cm Spikelets strongly laterally compressed, flattened, I flowered and with or? reduced scales or imperfect glumes below the floral glumes. Frapty glumes boat-shaped, strongly keeled, keel broadly winged. Floral glumes about haif the length of empty glumes, keeled. Grains free Common in the fields of wheat, barkey, etc. Used as an animal fodder Local name ; Chrrya-bajra Flowers and Fruits: Feb.-March I. K. Maheshwari 602, Najafgarh fields 27. Actoropes Trin A. lagopoides (Linn.) Tran ex Thw. Frum 374, 1864, sphalm "lagopodioudes"; Druce in Rep Bot Exch. Club Brit Isies 603, 1917, Dactieus lagopoides Linn Mant 33, 1767 Acturopus villasus Trin ex C A Mey, Verz. Pfl. Cauc. 18, 1831; FBI A tigid perennial herb, with long, wiry roots. Stems 15-30 cm., densely tufted, hard, creet or prostrate, terminating in a naked, slender



THE R. LEWIS CO., LANSING er f n 11 - 1-1 so the police makes there the on the E. ellianomer (A.1), in call of the All and All and the All th The property of the second sec the disaff. Leaves up to 20 18 cm white spreading to he have thed leafy Leaves up to some branches spreading a horse product of the product of paraties creek treate-comme, specially 1 2 + 2 4 cm fler e the acred. Puters with a holate keels. Ceta on g those release brooks ommon on the Ridge and in the plains during the mapager period Flowers and Fruits May-Oct J. K. Maheshwari 1064 E. posecoides Beans Agrest 162 1812 Durhie. Gr. N. W. 1nd 38 A chip ent Purpub (1 170 Sprague & C F Hubb in Kew Bad, 17, 1933 Bor, Grasses Ind. 512. Pos gragrastis Lmp, Sp. Pl. 68, 1753. Fragrestis minor Host, Gram. Austr. 4 15, 1809 (in nota) & Fior Austr 1 135 1827, Blate & McC Bornh Gr 238, † 158 An annual tofted grass, 15-45 cm tall. Leaves thear, margins debnitely giandular sheaths bearded at the mouth Particles ovate to oblong hranches spreading when maine. Spikerets narrowly obling page green or purplish, longer than the pedicels, 8-15 × 2 mm Rachilla persisten. Grams about 0.5 0.4 mm, brown, rounded Common throughout during the monsoon period on moist soils. Flowers and Fruita: July-Oct. J. K. Maheshwari 1310 E. tremula Hochst ex Steud. Syn. Pf. Glom. 269, 1854; FB1 7 320 Biant & McC. Bomb Gr. 239, t. 159, Stewart, Gr N W Ind 422 Poa tremala Lamk Tabl. Encycl. 1: 185, 1791. A tuited, erect or ascending annual, 15-60 cm tall Leaf marging eglandular Panicies very diffuse, branches solitary, finform, ascending Spikelets 10-20 x 2-3 mm., narrowly linear, branchiets with long, white pairs in all axils of the panicles. Floral glumes broad ovate, 3-nerved Grains nearly giobose A common grass near Najafgarh in fallow and cultivated fields, on



Leageastis tenella Roem, & Scholt var viscusa Stapf in Fift 7- 3 5

A tuffed, sweet-scented grass 12 to 10 to 30th Stems and ruch a gr nanicle, pedicels and glumes with affected minute glouds. I caves flat or convolute, erect, with road up. Panicles dease, by indrie or objoing, feathery, branches numerous more less preading. Sprkelots often purplish, rachilla readily breaking up. Grains pule brown, polished Common in damp places. It which resembles R tenella Risem &

Schalt, which, however, is not viscous Flowers and Fram: : May-Oct

386

E. teach (Linn.) Room. & Schult Syst. 2 , 576, (817, FB) 7 ; 315 Bia t & McC Bomb Gr 232 Row Grasses and \$3 Poa tenello Lino, Sp. Pl. 69, 1753

An erect or genicularity ascending tufted annual 15-30 cm ta Culms glabtous, amouth. Leaves narrowly linear, tapering to a fine point. Panic es plumose, loose and open or contracted green or pur pish. Spike cts 2.4., mor oblong rachilla breaking up from above downwards. Paseas cifiate on the keek.

Common and abundant during the measons period on moist 503 especially is open places.

Flowers and Fruits May-Oct. J. K. Maheshwan 12

E. diarrhena (Schult / Stead, Syn. Pl. Gloin, 266, 1854, B. r., Grasses

Poa diarrhena Schult, Mant. 3 ; 616, 1827.

Eragrosto interrupta var diarrhena Stapf ex Hook 1 in FBI 7 316, 1896

A tufted, erect slender griss, from a geniculate and ascending base Leaves stender, narrow flat Panicles contracted long, narrow of appressed or short, spreading numerous fascicled or subwhorled, spiculate branches giving the panicle a lobed appearance. Spike ets very minute, often purposh of pioxish in colour ovate to linear. I ora-Riumes obtuse,

Common in dry places or damp soil near banks of rivers and ponus. The colour of the inflorescence and the angle at which the inflictescence branches spread is very variable.

Local name ; Lamp Flowers and Fruits : Aug. Oct. J. K. Maheshwari 1057

## 30. Alopecurus Linn.

A. nepalemis Tran ex Stoug. Syn Pl Glum 148, 1854, Stewart, Gr NW Ind 436, Bor, Grasses Ind 393

the 면비 ab

A prostrate or ascending ten els tulted grain. Colina clender the anex erectors go when a present the second state of the second state of the second state of the second of pitter young closely over all Calmines a rate on the keets. Awar

Co feeted of ce from fear a dirry water ditch in village Uzirpur J K Maheshwari 1038

## 11. Alluterapsis Prest emend. Hitch

A, emileina (f. or.) S apř m Pra o. Fl. Teop. Africa 9. 487, 11,9. H a McC Homo Cir 129, c 83 M toan contemum Linu Ment 184 ,771

Aximopus cimu mia fleauv Agrost 12 (812 FBI 7 64

An arrival, erect or decumbers grass. Culms and leaf margins clothed with long, horizenia, e na Nodes somewhat swomen Leaves water anceolate, acuse cita bulbius-based. Racemes spike like 45, borne on the top of a slender, hairy peduncle. Spikeless solitary or convered 3-5 2 mm Grate or clops c award creck. I pper involucing glante with long, purposh hairs on the marginal nerves. Floral glume of the upper floret with a short, stout awn

Occars sporadically in moist, stony ridges and fissures; collected from

the area near Gurukul, Fandabad.

Flowers and Fruits : July-Sept J. K. Maheshwari 1244

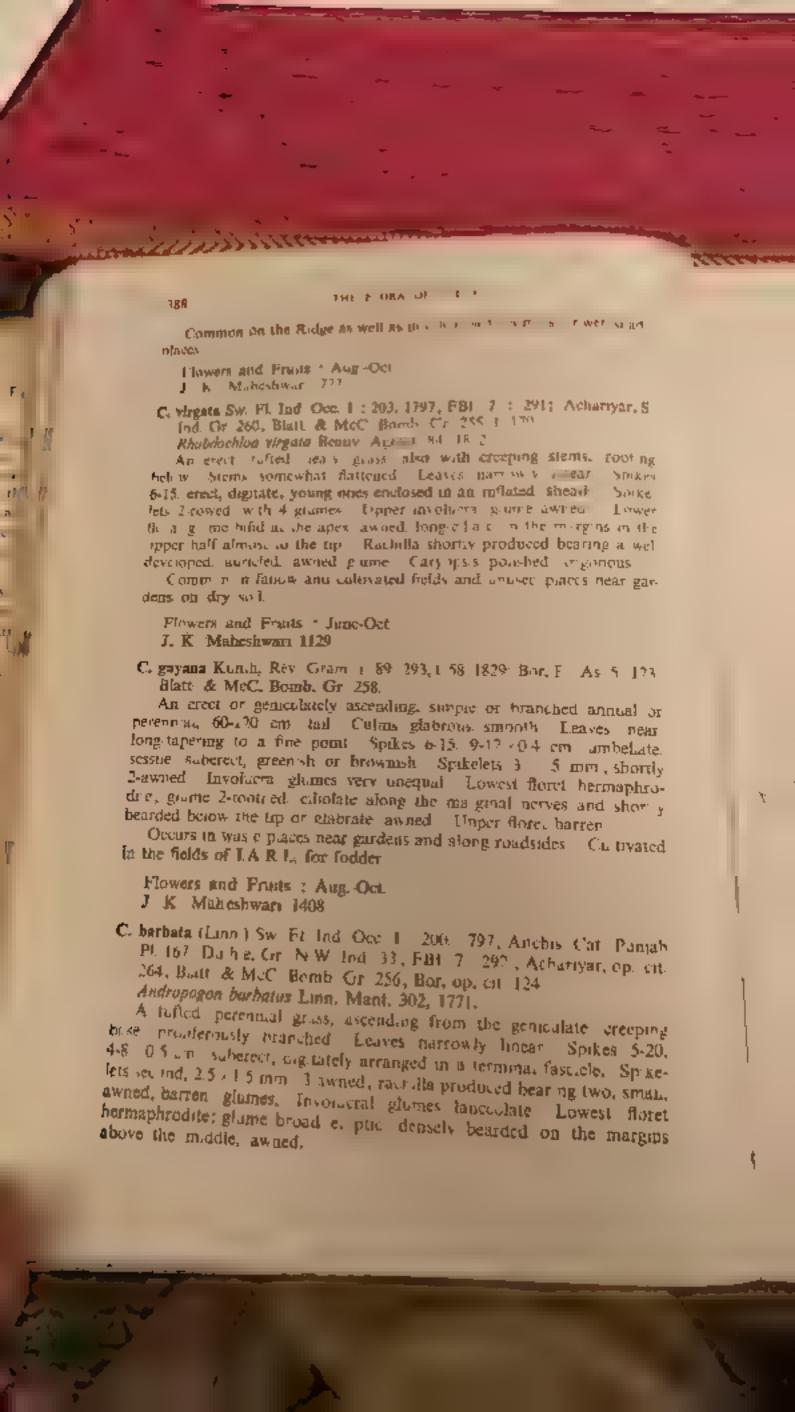
Spikelets 2.5 mm, long 🕝 . . . .

#### 32. Chloris Sw

Empty glames above the flore, solitary, well developed or runing italy Emply glumes represented by a fine arista spikes long siender, . . . C. dohchostachya awned. Empty glumes oblanceolate, truncate 🕝 Empty glumes above the floret 2 or 3: 

C. dolfchostachya Lagasca, Gen & Spec Pl 5, 18.6 Ber Grasses Ind 466 C. incompleta Roth, Nov. Pl. Sp. 60, 1821 | FBI 7 290

A perennial grass with erect or procumbent stems up to 1 militally often branched Leaves linear Inflorescence of generally 5, digitate, spreading spikes forming a termina whorl. Spikelets awned many, 5. 1 mm. imbricate, 2-rowed, secund, lanceolate closely appressed 1 pper involucial glume produced into a very short awa. Lower flora, glume with a median awn up to 9 mm. long, callus bearded upper glume rudimentary



AMPIGE the review and passive ground and in outsity of fishes expensity in udy sorls. ter in 33. Paspaluti I (1) P distributed a 12 of 8 and 5 and 6 Granes v active cong perennial, thiz recome grass Stolens long corning loose mais. Chima erect or decumbers I'm was as hing glabrone Ra eng s metaline s remaind crea the contract of the same printer to be a second printer of the same of the sam to all the action and the series and the spressed on the rates t craf game at ent Caryon car, o, depressed-convex or near the banks of Handan River, Na ufgath Droin, Okhla e mg, and near ponds and puddles Flowers and Fruits June-Sept J K. Maheshwari 306 34. Digitaria Heist, ex Fabr Spikelets bearded with soft, spreading hans D. auscendens Spikelets not bearded . . . . . . . D setigera D' adscendens (H.B & K.) Hear in Blumea I 192 1934. Bor in Webbia F1 4 W. 12. 13 11 350 1955 & Grasses Ind 198 Panieum adscendens H B & K. Nev Gen. & Sp. 1 · 97, 1815 Digitaria funbriata I mis. Host Berns 1 - 226, 1827. D marginata Link var fimbrinia (Lipk) Stapf in Prair, Fl. Trop Africa 9 : 440, 1919. D sanguinal's Link) So p or marginara (Link) Fern in Rhodora **22 : 103, 1920** An erect or decumbent annual grass up to 100 cm tall. Leaves linear to a tear-lanced are. Spikes You more. Spikelets oblong, scate, appressed to the race as binate praced of charges, shorter than the either topper involucial glume calcate. For at grume dense y bearded with soft, spreading hairs, hairs at first d. Il white, turning brownish later A common grass occurring throughout on at types of seas dry or nio's. It is easily recign zable by its epospicables y bear ied spikelets Flowers and Fruits : July-Oct J. K. Maheshwari 1143, canal near Najatgath D. seligers Roth up d Riem & Statt Syst 7 474 18 7 Bor in Webbur 11: 344, 1955 & Grasses 1nd, 305 D. corymbosa (Roxb.) Merr Tasm 1 53, 1923

Panleion corembonius Roxb Hoet Beng, 7, 1814, nom. rind Digitaria extensa. Hook f.) Denr. in fl umea 1 100-1234 Panisam e trensum Nees & Are in Wt Car in 2340, 1833 non Et

An armore tall tufted grass Culma smooth garbrors. Leaves I near to linear anceolate up to 20 - 1/2 cm, rough. Rasemes subjuggfarely arminged on a strong commen axes, taches name why winged. Spikeiers eleptic 2.3 mm, ong. Lower involuctal glame a sma, hyne te scale or obsole e. Lower floret sterile upper herriaparodite, floral glame chartaceo is:

Common in waste places near fields and along conduides.

Local name 1 Kiwai Flowers and Fruits: July-Oct J. K. Maheshwari 1060

#### 15. Cynodon Rich ex Pers. nom. cons.

C. dactylor (Line) Pers. Syn. 1 - 85, 1805, Duthie, Gr. N.W. Ind. 32. FBI 7 288 Biatt & McC Bomb Gr 250, t. 166 Bor, Gr L P 110, t. 22 & Ft. As. 5 - 125

Panicum dactvlon Linn Sp. Pl 58, 1753

A perenmal grass with an extensively creeping base. Cultus siender, many noded, wiry, forming matted tufts. Leaves . near, acuminate, 3-10 x 0 2-0 4 cm. Spikes 4-5, digitate, arcuate-spreading, green or purplish Spikelets interady compressed, sessile, appressed, imbricate Fioral gittines boat-shaped

Common and abundant, forming a carpet in lawns, extensively used

as lawn grass. Used as cattle fodder

Local name ; Doob Flowers and Fruits: Major part of the year J K, Maheshwari 516

## 36. Eleume Gaartn.

Prostrate or creeping grasses, rooting at the nodes; spikes digitate . . Erect grasses ! . . . . E. compressa Spikes digitate . Spikes scattered or whorled . . . E. indica

E. compressa (Forsk.) Aschers & Schwith ex C Christensen in Dansk Bot Archiv 4 No. 3, 12, 1922, Bor, Grasses Ind. 492 Panicum campressum Forsk Fl. Aegypt - Arab 18, 1775.

Eleus ne flagellifera Nees in Linnaea 16 220, 1842, FBI. 7: 294.

A prostrate, long-spreading, proliferously branched perentual. Stema smooth, stiff rooting at the distant, thickened, leafy nodes and putting

forth slonder branches. Internodes 10-20 cm tong Lenves 2-4 -0.2-(0.3 cm., rigid. Spikes 3-6, digitato; ra 1 is flexur as Spikesets imbrioste 4 to 6-flowered. Upper invocate at gathe at vare. Floral glumes ovate

Common to sands a dinear Jamung River and on the River and ad it (ig i d) tracts near hard had Mehtaul where t spreads confusely to open ally places or amongst the thereby should The plant brows neval ran ters in all cirections and spreads very quickly. Assessment to

Loca name Gadaghas ; Chembar Flowers and Fruits . July-Oct. J. K. Maheshwarl 903

E. Indica (Linn.) Gaerto, Fruct. 1 8 1788 Archis Cat Pumah Pl 168 Duthie op. en 34 Blatt & McC Bomb Cr 259 Bor Fr. As. 5 108 & Grasses Inc. 491

Cyromans indicus Linn. Sp. Pl. 72, 1753

An erect annual, 30-60 cm high sample or branched. Culms glabrous, somewhat compressed. Leaves distichous, flat or folded, sheaths ciliate. Spikes 2-7, elongate, digitate with 1 or 2 below the umbel, suberect or subrecurved; rachis flattened. Spikelets biseriate, secund, pointing forward at an acute angle. 3 to 6-flowered, Grains oblong. obtusely trigonous.

Common along the edges of fields, on pastures and roadsides.

Flowers and Fruits: July-Oct. J. K. Maheshwari 732, Najafgarh

E. verticillata Roxb. Fl Ind - 346, 1820 Antebas loc ent. Duthie, op. cit. 34, FBI 7: 295.

An annual. Claims rufted erect, 30-60 cm high, sample or branched Leaves linear, lanceolate about 20 15 cm or more, margins subdenticulate Spikes 6-70 scattered or whosed, subcreet, with numerous, close spikelets. Spikelets 6 to 12 flowered, 4-7 3 mm, shining. Empty glumes unequal, keels subdenticulate, upper one acuminate or aristulate. Grains oblong, rugose,

Common and sometimes abundant on the Ridge to depressions and shades of bushes and also in the plains in waste places, along roadsides and in cultivated fields on dry, sandy soil.

Local name : Makra Flowers and Fruits; July-Oct J. K. Maheshwari 248

37. Ductyloctenium Willd.

. D aegypthus Annuals, spikes 1 3-3 8 cm long 🕟 🧓

Page 34 1 HI 7 394 A cree reductioners who was a consular. Characteristics te pascia differenti ne bijorci od mili si il tra esi on ne interiori. near flat 5 kes 50 agracia radia agrandis actived in Keeasely crewded is, readine at right langues to the rations 3.5 is non-Lower proporal grome cal printe in terral ped Form places outnate or award. Grains obovoid-globose, rugose

Common during the processor period on the Ridge of Gegressors and amongs, husbes and shrubs and as a weed in cultivated fie do and other places often becoming abunda it. Erect prostrate and disality types are known from the trea-

Local name - Makra Flowers and Fruits . May-Oct J. K. Maheshwara 4

D. sindicum Beass Diagn Pl Office (ser 2) tase 4 - 31 - 859; Built & McC. Bomb. Gr 264; Bor, Grasses Ind 489 Eleusine sindica Duthie. Fod. Gr. 58, 1888

E aristata Enrenb. ex Beiss 11 Oriens 5 557 1884 FBI 7 296

A dwarf siender prostrate pereannil grass, proliferously branched Stems for ing at the distant, thickened woody, leafy nodes. Leaves, Linear, charte with bulbour-bases mais. Spikes 2-6, 6-13 mm, long Fioral games ovate cusp date keeled. Grams evo d. rugose

Common in sandy places. Detailing a think refe of plants trutted with

Flowers and Fruits : July-Sept. J K. Maheshwart 325, near Okhla

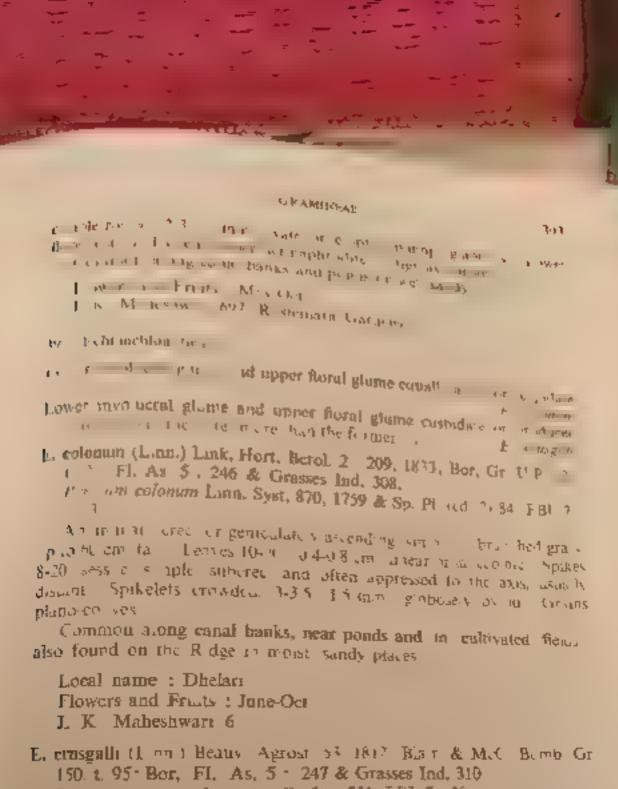
# 38, Paspalidium Stapi

193

P Rayidam (Retz. A. Camus in Lecentre Fr. Gen. Indo-emine 7., 419). 902 Blat. & Mcc Bernt Cr (4) 1 90 Box Gr DP 370 1 44 FT As 5 258 & Grasses Ind 143

Pancim havidim Rett. Obs. 4 . 5 1786, FBI 7 28

A turned annual 30.35 or long. Colors geniculately escending or erect prancied Leaves 5-25 05, 2 cm than ascend g line in lin ce unte l'ode rescent e a pari de 16-9 faise, sessile, distant, érect spikes at pressed to the ria n axis, recurved. Sprkelets closely imbricate, secand



Pan am artigat. Linn Sp. P. 55, 753 FBI 7, 30 report

An annual. Claims I mour so in length decembers or shortly everying be aw sample or branched. Leaves 1 % 8.5, em anear margans finely carblaginous lightly absent. Pan eles erect \$ .2 cm ung branches sol any or binate supered, in spreading discard except he upper ones or more or less lobed in appearance. Spikelets crowded 3-38. 1 am. waterell plus cuspicate or award greenish or tage twill purply sower floret barren, florat glame ouspidate of prid ced into a long, decinas awn. Upper floret hern ap rodate peoshed. Grains broadly e of c

Commen in the fields of sugarcane and other tains sessor to as grown it Najafgarn and Tomarpur. Also mer aloag it glaim coarress and canal banks. Used as cattle fodder

Local name : Sama ; Samak Flowers and Fruits: July-Nov J. K. Maheshwara 107, 443, 2054, 1055



40. Opliaments Bestin A small, diffuse grass, awas barbellate, capillary . . . O burmannii 4 mb branching grass, awas sme she vocal inform O Compusition

O. burmannii (Retz.) Beaux Agrost. 54, 1812; FBI 7:58, Batt & McC Bomb. Cr. 154, L 97, Bor Gr UP 158, Ft. As 5: 263 & Grasage

Paratum harmonnili Retz Obs 3 : 10, 1783

A prostrate or procumbent stender appear 15.45 cm long 2.5 0.6. U. n. made or mate-tance state, elliptic shang. Spiken second close in sheet numetes with distant spicate branches. Spikelets the 1.25 mm Involuera glames and lower form game award

Compon and abilitiant forming a dense carnet or Ferbaceous undergrowth it most show areas of gardens and other similar piaces a my

contail manks

Howers and Fruits: June-Dec. J. K. Maheshwari 1045

O, compositos (L no.) Beaux, Agrost, 54, 18 7, FB1, 7, 66, Blatt. & McC Bomb Gr 452 t 96 Hor Gr UP 157 t 42 A F As 5 362 & Grasses Ind 317.

Panicum composition Line Sp. Pt 57, 1753

A procumbent or subtreet annual rooting below 30-120 om one Leaves ovate to ovate-lanceofate, acuminate 5-, 5 122 cm flat Spikelets d stant, in pan cles with distant branches, about 4 < . 5 mm. Lower involucial glame awned

Common and abundant along with O burmann. Beaut forming a dense herbaceous undergrowth in moist, shady places of the fruit orchards The grass is attractive due to reddish or purposh-co oured stigmas

Flowers and Fronts : Sept.-Jan

J. K. Maheshwari 1044, near Jamuna Bridge

### 41. Bothriochkus Kumtze

B, pertusa (I nn.) A Camus in Ann Sec Linn Lyon (ns.) 76 : 164, .931 , Bor Fi As. 5 368 & Grasses Ind 109 Holeus pertusus Linn. Mant. 301, 1771.

Andropogon pertusus Willd, Sp. Pl. 4 922, 1806

Amphilophis periusa Nash ex Stapf in Agric News W. Ind. 15 (79) 19.6 Blatt & McC Bomb Gr 84, t 54

A siender crect or genrealistety ascending perennial. Nodes bearded with spreading hairs. Loaves linear. Racemes subdigitately fasciculate, silky, whitish, pale or dulf purplish, joints and ped cels densely enliate Sessue spikelets 3-4 ×1 mm., oblong-lanceolate, lower involucial glume with a deep pit above the middle upper floral glume reduced to an awn Pedicelled spikeless male or neuter, not awared

CRASSISSAR A very variable grass from month a party and private lawns presures. s only crevices and in very dry soil, Plowers' and Fruits : July-Oet J. K. Maheshwari 1056 42, Dichanthlum William D. annolatum (Forak ) Suspf in Prairie Pl Trop Africa 9 178 917 Hitte & McC Be is Cir 99 t 6" Bor Cir ( 1" 116, t 25, Fl At 5 Andropogon annulatus Forsk, Fl. Acgypt.-Arab. 173, 1775; FBI An creot or ascending, densely tufted perennial grass, up to I m. 121. Nides usually bearded. Leaves linear setuceous acumina c. Racemes. subdigreate v fascicled speciform, greenish or usually purplish or line gor often more joins and pedicels silky-harry. Sessit spike es hermaphrodite closely inbricate 3.5 I mm upper flora gipme reduced o a slender aw i Caryops s plano-convex, obovate-oblong. Pedicellate Very common throughout, especially on our lawns and passares a hedges and on roadsides. When grazed it puls forth prostrate shoot It is often confused with Botherochina pertusa A. Camus hur is easily recognized by the absence of the pit in the lower glume. Used as calle fodder and horses seem to like it Local name : Zarga; Bartu; Apang Flowers and Frants: Cold and summer seasons. J K Maheshwart 743; 1066. 43. Desmostachya Stapf D. bipinnata (Linn.) Stapf in Diver. Ft. Cap. 7. 632, 1900. Blatt & McC. Bomb, Gr. 244, t. 162, Siewart Gr. N. W. Inc., 423. Box. Grasses. Ind. 491. Briza bipinnata Linn, Syst. 875, 1759 Uniola bipinnata Linn. Sp. Pl. 104, 1762 Erogrostis cynosuroides Beaux Agrost 162 1812 FBI 7 324 A perenn al, tail grass, branching from the base. Culms 36-150 cm. high, tufted, smooth, erect. Leaves linear to linear-lanceouse rigid, with Laform tips, up to 40 × 1 cm, margins hispid. Panieles 15-55 cm, long narrowly pyramidal or columnar, reddish-brown or brown it mater ty Spikes many, short, up to 2.5 cm long, crowded. Spikelets sessile, second, 2-seriate, deflexed Common and abundant in the Khadar tract, in fallow fields, unused ground, along roadsides and boundaries of fields, and on dry or title wet, sandy, yellowish-brown soils often growing in dense tufts and IE FI

Π¢.

- 14

171

M

E

24

я 31

315

process gar form a true patch, diplants. Occ. is not be 20 E Dean in association with Sporobolic may no at 11 a c Michiga. passibilings Desy. The cities as so later that he be-

Fical name | Dnah | Dhab Flowers and Fruits. Juse Oct. J. K. Moheshwari 150

#### 44. Leptochion Beaux

punicer Reta i Ohwi in Bot Mag. Tokyo 55, 311, 1941. Bo. C. , d 517

For pumien Reg. (bs. 5), 11, 1768.

Leptochina filiformia Hook f. in FML 7 - 298 . 6 % 4. Gr. N.W. Ind 192; FBI 7: 298

An annual, geniculately ascending, sleader grass ( 1700 6 m) high, glabrous, many from a common base. Leaves up to 25 flat, finely acuminate. Panieles 10-20 cm. long, continued or diff. branches very many, capillary. Spikes 3-10 x 0 10 spreading. Spikelets very small 2 to 4 flewers J.

Common in moist situations near causis and ponds

Flowers and Prosts . June-Sept J. K. Wabeshwari 887 1059

### 45. Grochlon Beauv

L. panicoides Beauv, var pubescens (Kumth) Bor, Grasses Ind. 377, 1966

Urochloo pubescens Kunth, Rév. Gram 1 ; 31, 1829

An annual, tuited grass, creet or generalately ascending then es linear to finear Lineadate, pale or yellowish green, base wider semeampackicaul. Inflorescence of 4-7, erect or spreading, spicit am second racemes. Spikele's 3.4-2 mm, orate to elliptic ob 1932. Personant e pubescent. Involuces glumes dissimilar, lower one clasping at the Mac

Common along canal banks and on pasture ground

Flowers and Fruits; Aug.-Oct

J. K. Maheshwari 1249, near Napafgarh Drain

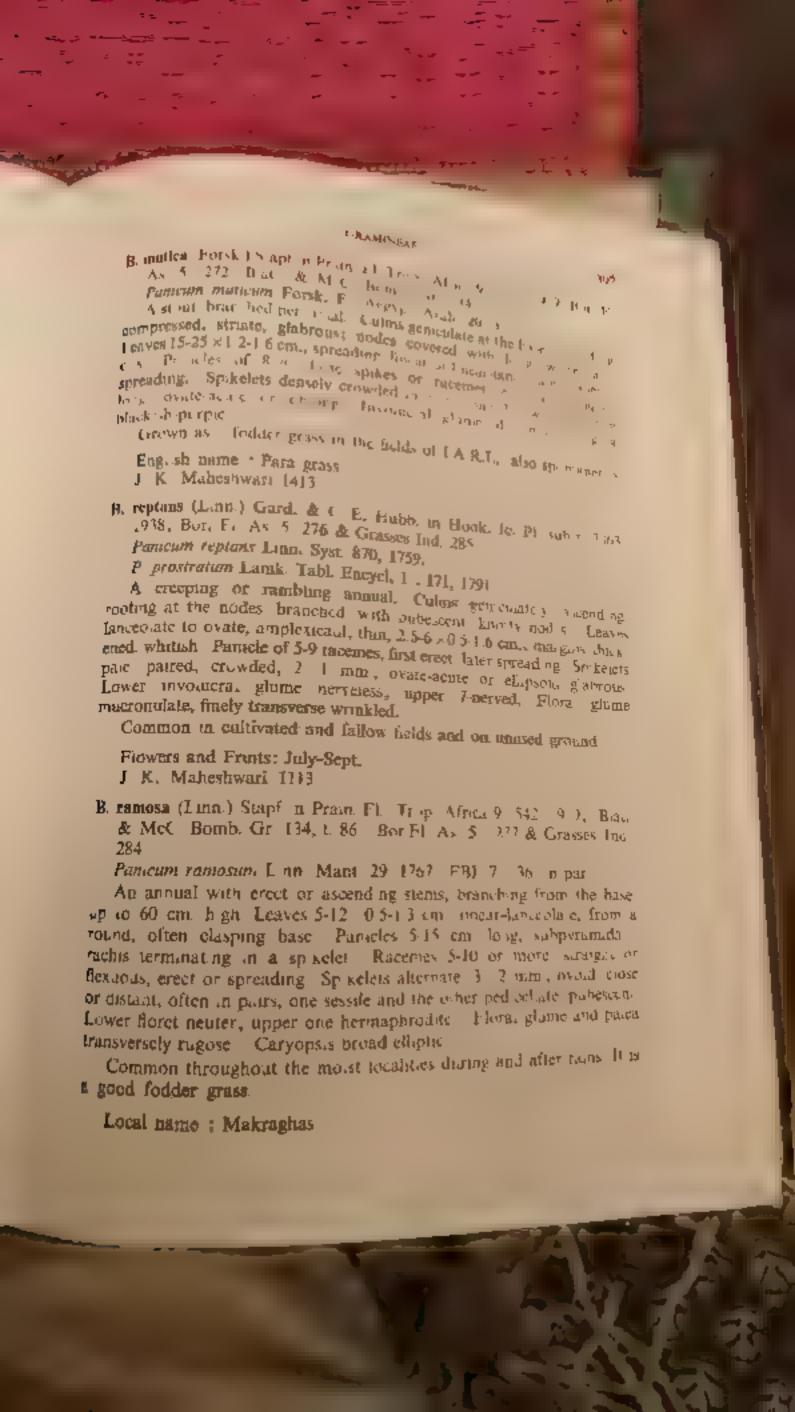
## 46, Brachiaria Gresch.

Spikelets densely crowded, 2.5-3 mm. long; shouth nodes usually ong-

Spikelets toose or a crowded, less than 2.5 mm, sheeth rodes a driver of pubescent; culms stender :

Spikelets 1 5-25 mm tong, ractes traquetre as 8, skelets 2.5-4 mm, long, rachts tric letrous or flattened

Spikelets 5-many, hargid . . . . . . . . . 



Plowers and Figure ? Jone-Oct J. K. Maheshwari J.

H. eletuchya Stapl in Prain, Fl. Trop. Africa 9 565, 19.9 , Bor, Fl. A. 5 28. & Gastice Ind. 281

Pameum Strinekrum Linn, Mant. 183, 1771

A signific glade is gray. Note you high halts at the mades covers creet or apreading, linear-lanceolate, rounded or amplexicant at the base Space and a concentration of a state of the space of the state of the GO CHES

Met awag the margini of fields

#### 47. Aristida Lian.

. A adscensionis Involuctal grames not awned. Involuctal glumes award . Spikeiets [6 mm, long -

Spikeiels 40 mm, long . . . . . A hystrix

A. adscendonis Line. Sp. Pl. 82, 1753; FB1-7: 224, Blatt. & McC. Bomb. Gr. 209. L. 138 ; Bor. Cirasses Ind. 407.

A stender erect or astending sample or branched grass, 20-60 cm high-Leaves narrowly macas, up to 30 - 0 ? cm. Inflorescence a lax, narrow, onear spike-the particle usually interrupted branches erect or noticing, flatform. Spacetes 7-8 1 mm. ing (excluding the awn), erect, green, ma are ones turning purposh. Insolucial glomes acuse. Floras glumes laterally compressed awn trepartite central one longer than the laterals. Carvopsis as long as the glame.

(a minor a wabundant on the Refer in dry gravelly soils and depressions and also in the vated fields and near canal banks, forming do not tufts in iocal parches.

Local pame Lamp Figwers and Fruits , July-Oct. J. K. Maheshwari 1067.

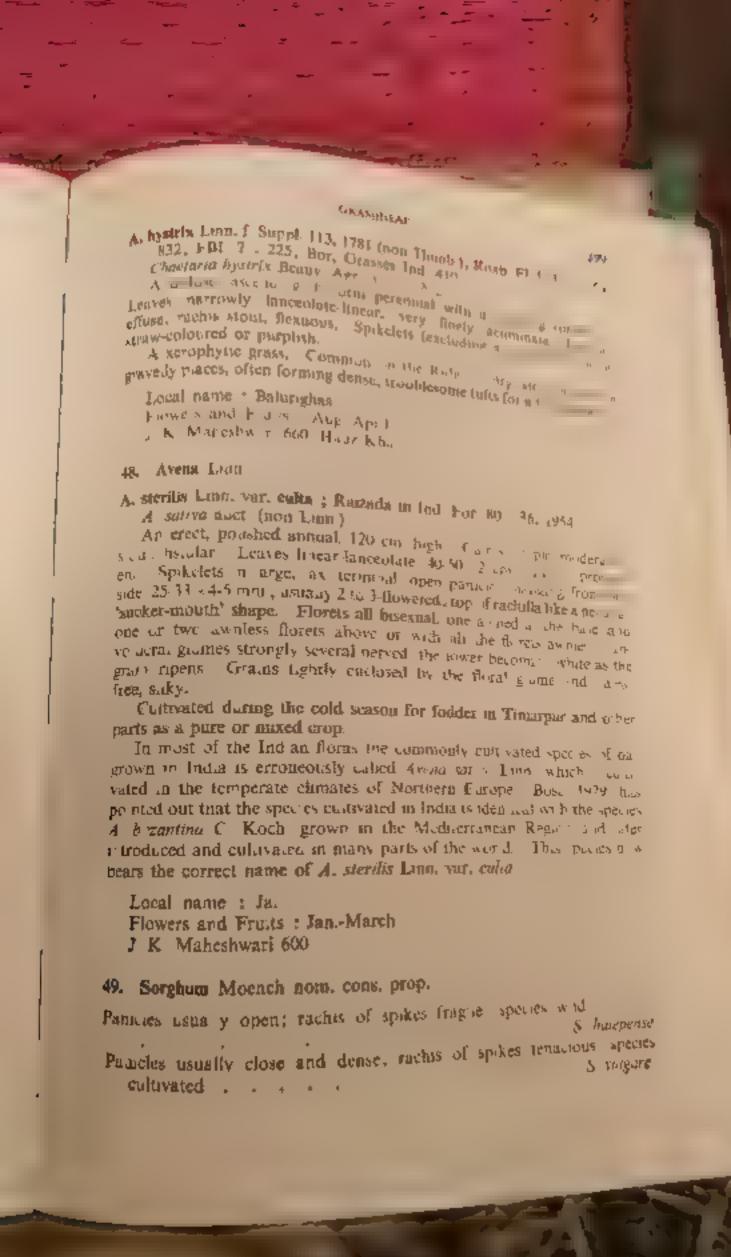
A. sefeces Retz Obs 4 22, 1786 Duthic Gr N W Ind. 27, FBI 7 235 Big & McC Bomb Gr 21) 1 139, Bor Grasses Ind 412

An erect or geniculately ascending fillform grass, 60-90 cm high Stems smooth prostled. Leaves 15:30 0:20.4 cm. conaccous, smooth Parmies med and open or contracted, branches fil form or capillary, thus by fast cled and erect. Involucial glumes awned. It oral grames 6 1 our ong, awas 3, subequat or the middle one the longest callus bearded with long hairs

As commen as A hourse Linn f on the R dge in dry places.

Flowers and Fruits : Aug -Oct J. K. Maheshwari 1265





S. helepense (Lin Per Syr Mt. 1805, Duthie, Gr. N.W. Ind 23 Bart & Met. Bamb. Gr. 55, 1, 37, B v. C. 13 P. 200 1, 60 & Grasses

Holeux halepensis Lann. Sp. Pt. 1047, 1753 Andropogous non-penting Best El Lier 1 - RO (xint + B) 7 - 182

A personna all also greves them la resolute. I disresce we a ise in const passed in one and purplish in colour. Sint in my pranches a to have district diffuse. Spikelets because it the teps of the branches and branchiess, green or purplish, brown and polished at maturing to a min. Sessile spikelets hermaphrochite, pedicellate ones male or pepter.

Calonia mas a wood in contrasted and fallow fields, also found in hodges and along banks of canals. Used as fodder

Local name : Baru Flowers and Fruits Sept.-Nov J K Maheshwari 74.

S. sulgare Pers Syn 1 101 (805; Blatt. & McC. Bomb. Gr. 58 Andropogon sorghum Brot Fl Lus 1 88, 1804: FBI 7: 183 Holeus surgitum Lina. Sp. Pl. 1047, 1753.

A tail stout annual grass I eaves broad I near Panieles donse, thers form, decompound, with crowded whoris of exect branches and branchie's Spikejets large, broad, haary; pedicellate ones asually nouter Cuttivated as a food crop in the urban parts.

Local name: Jawar Flowers and Fruits: Sept.-Oct. I K Maheshwari II

#### 50. Chrysopogon Tran. nom. cons.

Plants smale 30-50 cm, high, spikelets acicular, callus of sessile ones as Plants stouter over 90 cm, high, call as not nearly as long as the spikelet

C selectatus (Retz. Trip Fund Agrist 188 1820), Duthie, Gr. N.W. nd '2 tate agreet Her Et As 5 357, Bast & McC Bomb Gr 68 Andropogon accemans Retz. Ons. 5 - 22, 1788., FB1-7 - 188

An erect or ascending perennial grass with a woody, creeping thizome, ower internodes very short the upper clongate. Leaves densely tufted, near, margina of natose. Panic es erect, pale green or purp ish, narrow, branches tragile it form, spreading. Spikelets in threes, awned, one sess to here a shrudite 3-4 - 1 mm. the two lateral male or neuter, pedicentate. 4-5 -1 mm, peduncie hairy and fulvously bearded at the top Caryopsis linear

CHAMOSTAR Occurs to wante places and pasture. It is a persmall awas which stick to he cother Mowers and Fruits Aug O. J. K. Mahoshwari 1227 Courses to Cample C. fulvis (Spread ) Chiuy, Ft. Somala ( 1) Politinia fulva Spreng. Pugell. 2 10 18 Andropograp atom is his School Mans 3 back 8 A all densely tofted percod a gran full erec these officer we was endor surger to deared the expanse without the paper Panicles open, evalo or extended to his steads who a capture, who tree spreading up obsique brown barrard and x ring the fatty faceing of a single service hermaph od a and was not a depraise spikele's Sparele's todding 4.7 ? Thin Sessie spiker, and grand specific and the produced his two small unequal away upper graine as indian to pedice led spike ets dorsally committated peaneth eas than ha he length of the sessic spikelot A characteristic or night-resistant grass of the Kon of tilly a ca Common on the Ridge and adjacent hilly tracks in gravery ac acamongst stone histories and on steep slopes in crovices, flen growing amongst the bushes of Adhatoda varied Nees it grows well in tight soils and is relished by cattle. Local name : Zarga; Dhawalu Flowers and Fruits : During and afer run J K Maheshwari 258 51. Polypogon Desf P. monspeliensis (Linn.) Desf. Fr. Marx. 1. 67, 1798, Datois, Gr. N.W. Ind 30, FB1 7 245, Blatt & McC Bomb Gr 207, Box Grauses Ind., 403 Alopecurus mouspe amin L no Sp. Pt 6., 1753 An annual, tufted grass stout or slender from a geniculate base. glabrous. Leaves ovate-lance state, 1-6, 0.6 cm, scabrid sheads often swo len. Panicies spike-like dense cylindric somewhat ught green obulate siky. Spikele's minutely pobescent, very shortin pelactical about 2 - 1 mm. Involucial glumes subequal, citate, award. Flora glame broadly ovale-truncate award Palea oblong, up notetical Common during winter and early summer in sandy or silvy bods of Ja mana River and its banks in garden lawns, garden beds and conveted Ovary ovoid. fields. Also found on the R dge in sandy soils Flowers and Fruits . Jan -June J. K. Maheshwari 1039

4.2

### 52. Lophochica Reachs

L. phleoides (V. e.) Reichb, Fl. Ger. Front. 42, A36. Box Grassa Unf. 4.5.

F marminghall H Deph 1 2 1 85

A warm place or Pres Sec. 1 42 1868 [11, 409

An cost of according around prass 30.60 cm, with the result of the globous or harry, acaminate Plancks 10-15. The marrison reacted or lobulate. So he ets. 3 in 2 flexible 1 about 5 in more all gaines a new analysis there is the flower gluines. 2 hd. shorts award in the stress.

common in the University hwns and near edges of garden beds, grow

galacte of a sea a th Polypogua ownspeliensis Dest

Flowers and Fruits: Feb.-April J. K. Muneshwari 935; 1387

#### 53. Vetiveria Leini-Lisano,

V. zizamoides 1 nn.) Nash in Small, El. S.E. U.S. 62, 1903. Blut. & McC. Bomb. Gr. 65, L.40. Bor, Gr. U.P. 216, 1.64, Fl. As. 5, 355. & Grasses Ind. 258.

Phalaris zizonioides Lann. Mant. 183, 1771

A sensely tuited, perennial grass. Rootstocks with spongy aromatic sors. Compassion up to 150 cm, tall, usually sheathed a lalong. Leaves treet right. Panicles oblong usually contracted whorks or branches +1° with at to 20 rays. Raceines stender. Sessile spixeless 4-5 x 1.5 pish or brack. Involuera, glumes muriculate on the back. Ped celled tubercied on the back and upper tubercied on the keel.

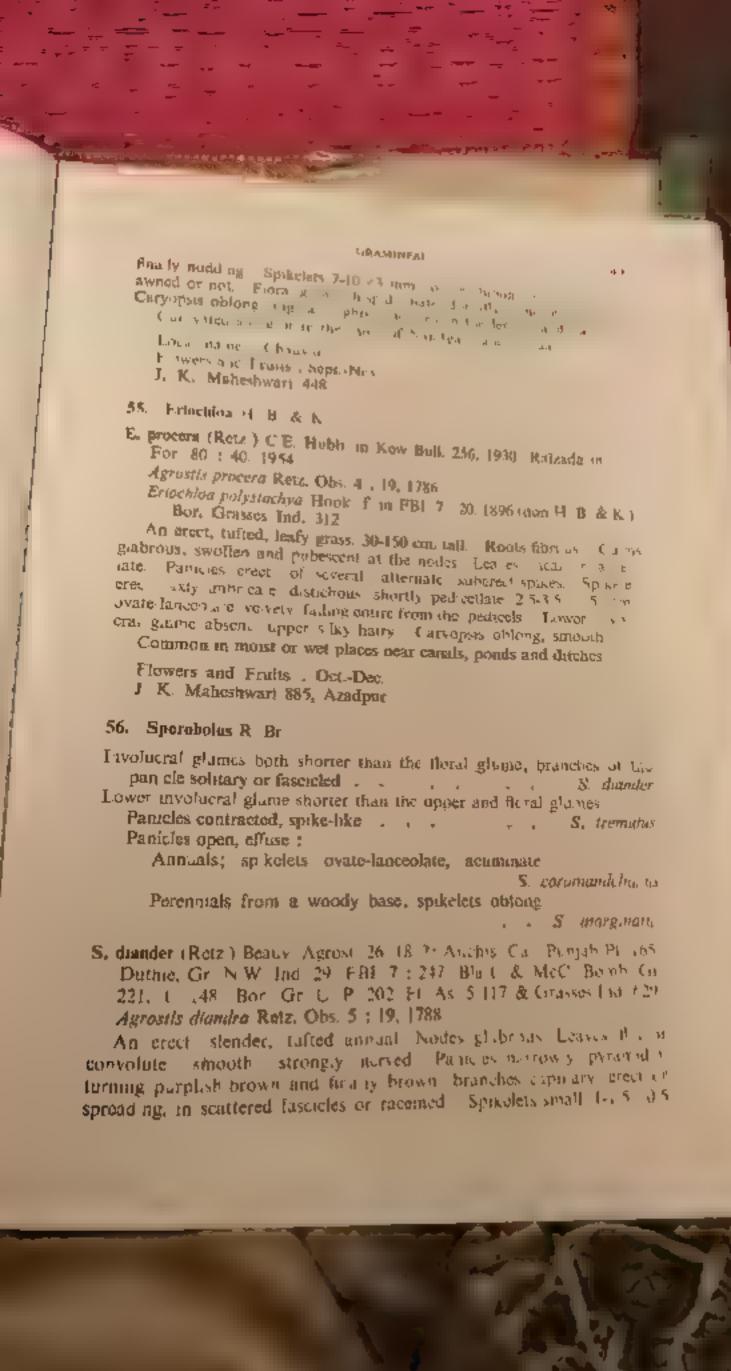
Occurs along the banks of Okhla and Najafgarl. Canals and other tributaries of Jamana Rives. Often cultivated for its fragrant rollts that fire an atomatic and medicinal foil of vetiver. The well known 'Khaswas' mats handfars and temporary house-roofs are made from it.

Local name : Gandar; Jhaund Flowers and Fruits : July-Nov. J. K. Maheshwari 292

# 54. Oryza Lep

O. sativa Line Sp. Pt. 331, 1753. Outhie, Gr. N.W. Ind. 12., Bt. 7, 92., Bran. & McC. Bemb. Gr. 274, t. 187, Box. Ft. As. 51, 170. & An appropriate for the control of the

An annual stass up to 15 m tall or more. Leaves linear-action as e. 50-60 / 6-0 8 cm, striate, I norved. Inflorescence a lax, creet pamele,



THE CHERN OF THE ! 41.64 shortly pedicalled. Grams true a of unit quarter a सहारोत a street was night of Control of the Reign of grovers, and amongst the shades of three-Paten er in depressions and also on moist pastine give 1 a mention F 1 no on unused pinces. Used as fudder for horses П их важе. Ос hawar and hrut Jon him 50, K Maneshwa 25 r Ruge 1896 Have Kie S. (remufas, W. fd.) Kunth, Rev. Gram. 1 \* 67, 1829 & Engin. 1 7 4 5 F Suppl. 166 FBi 7 250, Bor Graves Ind 633 demarks tremula Willd Sp. Pt. 1 - 179 (797 texel syn i Specialistic geniculaties Nees ex Aichirs Call Physics P. An ever prostrate or ascending suffed see a grass See-1 65 include femore short must marrowly linear. Part in farm we also spiciform membries with erect bean beautiful Spiceles or need arises of geet very shore pedicels glabrous. O mes I eried. Glain hourg ક મે Ď Common in moist, sandy soils and along grassy banks of poods Local name Konpath Flowers and Fruits . Aug.-Oct., March J. K. Maheshwazi 728 S coromandelianus (Ret. ) Kum b. Rév. Gram. 1. 68 - 829. Box (1728868) 1 id 527 Agrostis coromunileliana Retz. Ohs. 4 . 19, 1786. A densely tufted annual. Stems 10-30 cm. long, erect, ascending or prosurate cophiusly early below. Leaves incar-lanced are with tuberclebased hairs rewards he base. Paractes pyramidal acect, branch is capilany horizo tany spreading, a whork of 3-6 branchlets very close, appressed. Spixelets small. Grains compressed, smooth Common in all types of soils during the monsoon months Flowers and Fruits . July-Oct

5. marginatus Hocost ex A. Rich Tent. 14 Abyus 2, 397, 85, Ba. Grasses Ind. 632.

An erect perenant grass with a woody base of overing branches stant of sender 5.60 cm high Leaves narrowed from the rounded base of the tip flar minutely quate-serrelate. Panches pyramidat, appen effuse branches whorled horizontally ascending, nodding, capularly. Spikelets minute, about 2 × 1 mm, spindle-shaped, somewhat favours, I flowered crowded and subsessile at the ends of branches hower thy nucrai glame much shorter than the upper, nurveless. Floral glames ovale concrete. Paleas hystime, often spitting from the middle axis.

A common grass of dry habitats along roads, des and usur or saune



saids; often found in association with the one owing plants the Statetic GRAMINTAL fruiteera Forsk and Salada haryanna Dandy Flowers and Fruits - May-Ck.; J. K. Maneshwari 1220. 57. Arendinalla Radd A henghalezeda (Spreng) Drewe in Rep. B.u. Exch. Clash Bre., wer 60%. 1917, Her F. An S. 85 & Ciratics Ind. 421 Panicum henghatense Spreng Syst. 1 , 311 1824 Arundine list wallechlt Nees ex Steud Syn Pl Glum, 114, 1844 An erect, stout grass up to 1 m tall Culmu amouth gase a Leaves anceouste Lifforescence an erect congare pur de un a 10 con long branches stout spiciform. Spikelets I to 4 senare over the secund, densely ambricate schools stoutly ped celled, dark purple in vo us rat glames unequal. Lower floral grums oblong, paleate, stampare apper one hermaphrodate, parrowed into a short awe Rare Grows in tufts in waste places. Flowers and Fruits July-Oct J K Maheshwari 324 58. Panicum Linn Upper floral glume finely transversely rugose Upper floral glume quite smooth -P maximum Lower involucras glumes cuspidate-acumnate Lower involucras glume not cuspidate-acumunate P trypheron Spikelets long, narrowly lanceolate acommute; leaves broad Sprkelets ablong, ovate-oblong to elliptic or ovoid, acute or obluse Annual erect, early grasses, spikelets so dary or in pairs Perenniais, spikelets laxly clastered on the branches - . . P antidotate P. maximum Jacq Cod I 76, 1786 & ic. 1 1 13, Artchis. op ert 159, FBI. 7 49, Bor, Ft As 5 224 & Grasses Ind 327, Blan & McC. Bomb. Gt. 161, t. 103. A perennial, densely tufted grass. Culms erect, usually stout, simple or branched. Leaves grabrous, softly harry or coarse-hirsate with tubercle-based hairs, uncar to linear-lanceolate; margins scaberulous to spinurously scabrid Panietes erect or nodding, contracted or open, decompound, lower brunches whorled subtrect or spreading pedice's capillary, flexuous. Spikeiets 3-4 x 15-2 inm, oblong. Lower floret male; upper hermaphrodite

11 11

of Oh

 $f_{11}$ 

has a

ηħ.

ı.

ng.

(4 6

ng

threadaced from Africa. Cultivated in the fields of tARI

Flowers and Fruits . Nov -April J. N. Maheshwari 1405

P tripheron Scholt Mant 2 244 1824 FB 7 47 Blant & Mct Bomb. Gr. 158, Bor, Grasses Ind. 331

As elect or general tufted annual 30.90 cm high licaves that near Pancies 10-10 cm long, elfuse, crect r midding rachis, tier for fill fire scaberatous. Spikerets distant 25/3, 15 mm, ove d. glabrous, acuminate, green of purple involuctal glumes unequal. ovale. Lower floret harren, gleine broad ovato, apper one hermaphrod te-

Common on cultivated lands, borders of cultivated he ds, pasture ands and in marshes.

Flowers and Fruits . Dec.-Feb. J. K. Maheshwari 1116, Shahdara

P paledosum Roxb Hort Beng 8, 1814, norm and & F Ind 1 3.0, 320, Blatt. & McC Bomb Gr 162 Bor, Gr UP 366, Pl As 5 229 & Grasses Ind. 329,

P proliferum Hook f. in FBI 7 - 50, 1896 (non Lamk)

A peror mar, simple or branched, leafy grass, ascending from a creeping or spongy rootstock. Leaves linear or ensiform, flat, glabrous, 15-30 × 0.6-1.5 cm. many-nerved. Panicles at first contracted, then spreading, branches fasciculate below. Spikelets almost parallel to the axis, solitary or in pairs, 3-4 min. tong, evate-lanceolate. Lower involuctal glume one-fourth the length of the upper.

Grows in marshy places and along banks of rivers, canals and tanks.

Flowers and Frants: June-Oct.

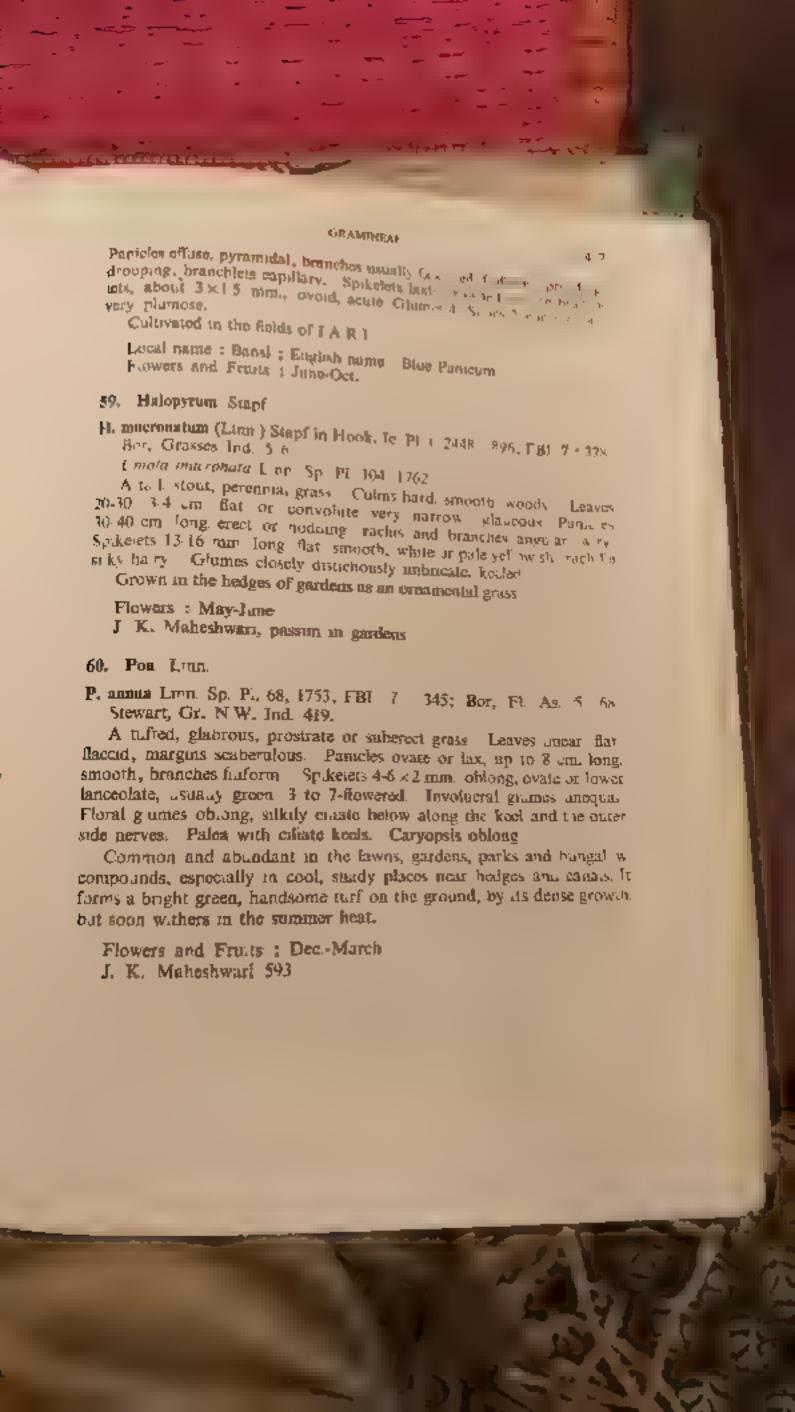
P. miliare Lamk Tabl. Encycl. 1 173, 1791, Astehis op. cst 159, Duthie, Gr N W Ind. 5 , FB1 7 46, Bor, Fl As. 5 232, Blatt & McC Bomb Gr 160, t. 101.

An annual grass. Clams 30-100 cm, high, erect or geniculate at the base, simple or branched, glabrous, leafy. Leaves I near, 15-60 x 1.2-2.5 cm., flat. flate d. Panielos very compound, contracted or thyrs:form, erect or nodding. Spikelets softwary of in pairs, 2-3.5 mm long, to psond or ovato-acute. Involucial glumes unequal. Lower floret neutor. upper one hermaphrodite.

Custivated in the fields of J.A.R I , also naturalized

P. antidotale Retz Obs. 4 17, 1786, Duthie, op. cit. 2, FB1 7 52; B'att. & McC Bomb. Gr +63. t. 104; Bor, Grasses Ind. 322.

A tall glabrous, perennial grass reaching 150 cm high. Culms solid, woody, terete, smooth, nodes thickened. Leaves 15-60 x 0.6-2 cm., linear,



# SELECTED BIBLIOGRAPHY

Amorphodol. 88% 884 Consulations of the Delta Diseases I always

1046-1987. The Pirmer of India Directory and Year Book. Booking

rent International Code of Dimensiolation for Code also Plants Regimes regulated vol. 22). Linechie Nosherianda.

Achtriper, R. R. & C. T. Mudnilper, 1925. A Headbook of some South fraings Courses.

Aby Shan, H.E. 1932 Note on taxonomic position of Naviania, s. L. and Dimer. Ken-

Afterioon, J. E. T. 1869. A Catalogue of the Plants of the Pargab and Sindit. London.

Alten, W. , 789. Horius Kawatasis (ed. 1). London, 3 vote. (ed. 2 by W.T. Alten, 5 vote.,

Altre, Z. 1945. Nomenclature of Otcifernus Brandom cultivated in the Punjab. Indian

Andrews, F. W. 1950-1956. The Flowering Plants of the Angle-Egyptian Status

Builey, L. H. 1949. Manual of California Plants (ed. 2). New York.

1950. The Standard Cyclopedia of Florticulture. New York. I soils ed. 6 soils... 1914-1917; reprinted in 1922, 1947 and 1950s.

Bember, €. J. 1916. Plants of the Penjab. Labore.

Basayole, A,M, F.J. P. de. 18 2. Even d'une anavelle agnostographie, etc. Paris

Seddems, R.H. 1869-1874 The Flora Svivatica for Southern India. Mauras 2 vois

Beetle, A. A. 1942 Studies in the genus Scupus L. W. The section Bulbonchoenus Palla Amer Jour, Bot. 29 , #2-88.

Beathalf, A.P. 1946. The Trees of Calculta and its Neighbourhops. Calculta

Hentham, G. 1835. Scrophubrineas Indicas. Loudon.

1871. Revision of the penus Causia. TLS. 27 : 501-592



# THE PLORA OF DELAIL

Benthant, G. & J. Ph. Hoober 1962 983. Cerseta Plan grunn, etc. I nuren Lycoly

Bhillian, Y.P.R. 1934. Squally &t De by Indian louis Seet & leaphys 5 5, 329.

Challer, G. S. 1912 Chiest of moneyon over Dehit, Indian Jour Met. & Goophys, 3 : 25, 16

Blatto, M. R. T. Flora de Fripinas, etc fed. 3) Afunda, ed. 2 1945, ed. 3, 4 vois 1879 giátik.

Rieffer, E. 1926. The Palme of British India and Caylon. London

Hietier F. A.F. (Sellberg, 19 & 192 The Flore of the Indian Desert ... (Jodhpur and Jahr). 18NHS, 26 : 218-246, \$25-555, 811-818, 968-987, ibid. 27 : 40-47, 270-279, 50m5 9

Histor E. & C. McCress. 1930-1935. Revision of the Flora of the Bumbay Presidency BN 5-34-291-106, 623-6 7-877-200, 1958-36 : 524-537, 781-795, (bid. 37 5-35) 255-277 552-348, 764-779

935. The Bumbay Grasset, Irop. Counc. Agric. Res. India, Sci. Mon. No. 5. New Dello.

Blatter E. & W. S. Millard, 1954. Some Beautiful Indian Trees. (ed. 2, revised by W.T. Sream, Hombay.

Biome, K. L. 1825-827 Bijdragen tot de Flora van Nederlandsch Indië

Bolatier, E. 1867-1884. Flora Orientalia, etc. Basel & Geneve. 5 vols.

Bot, N.J., 940. Grammean. In b. N. Kangilol et al. Flora of Assum, vol. 5. Calcur ta.

947 Common Graves of the United Provinces. Indian For Rec. (n.s. Bot.) 2 : .-220.

1953. Manual of Indian Forest Bottony, London.

1955 The Genus Digituria Heist, in Judia and Borma. Webbia 11: 301-367.

1960. The Grasses of Burms. Ceylon Todia and Pakistan (Excluding Bambuseae). London

Boc, N.L. & M. B. Raizadz, 1954. Some Beautiful Indian Climbers and Shrubs. Hombay.

Bose, R.D. 1929 The Indian Ost and the error in its identification. Agric. Jour India 24 . 69-174.

Brandis, D. 1874. The Forest Flora of North-West and Central India London.

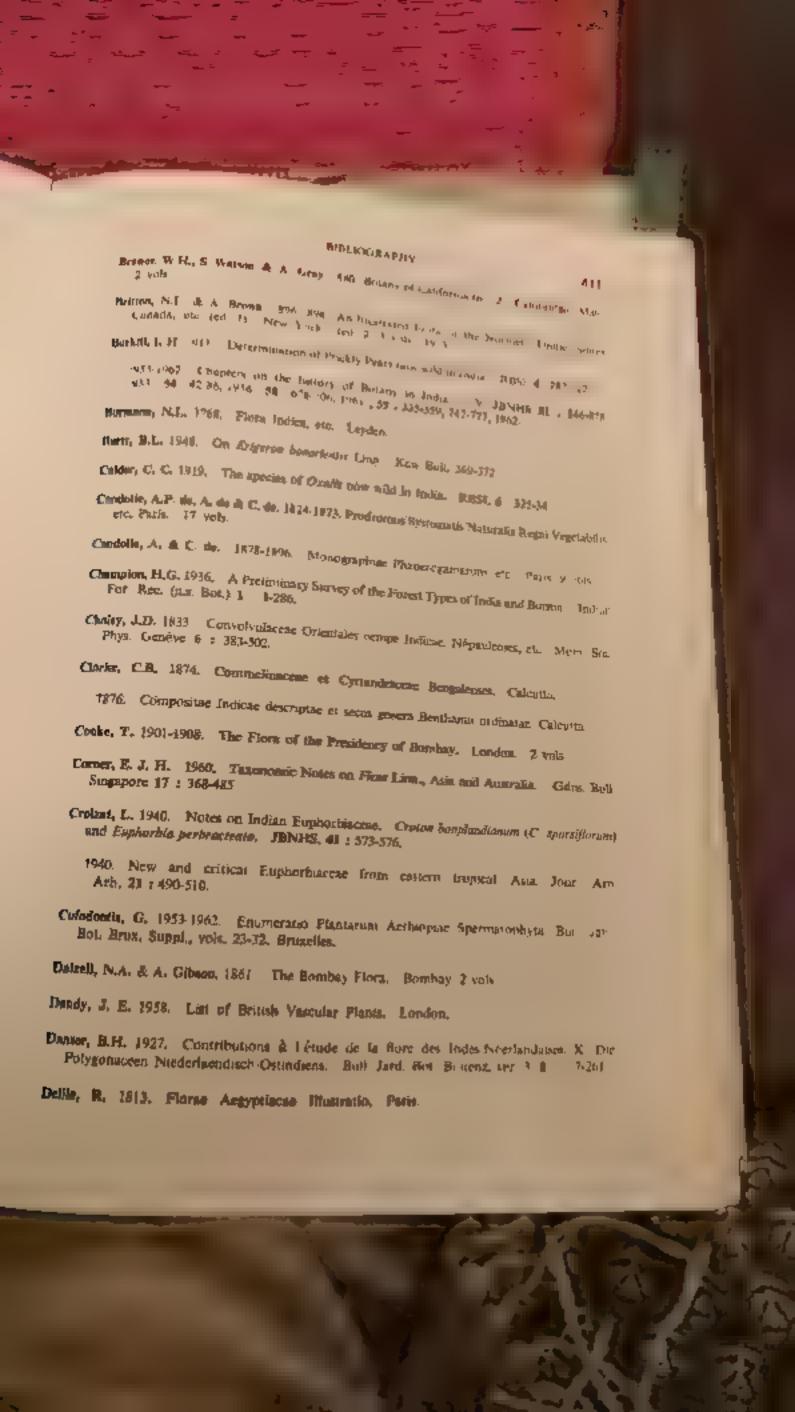
1921. Indian Trees (reprinted ed.). London.

Bremekung, C.E.B. & N.E. Nameaga-Bremekamp, 1948. A Preliminary Survey of the Rickinne (Acanthecese) of the Maley Arch peligo and New Guinea. 13 Verb. K. Nederl. Akad, Wet. (II), 48 (I); 1-39,

1948. Notes on the Acanthaceae of Java. (bid. 45(2) : 1-78.

Brenzo, J.P.M. 1953. Notes on African Onegracese and Trapacese. Kew Bull. 1953





Dus, D. 925 Prodromet Flores Nepaleosis London

(bubble, J.F. 48). A Los of the Circum of N.W. India, Indigenous and Cultivated

636 Blustrations of the Indigenous Police Grasse of the Plates of N.W. India.

1882. The Podder Grames of Northern India. Roorkee

on 1474 Flore of the Upper Gengelic Bale and of the Adjacent Stwaink and Sub-Hundajain tracts. Calcute. 3 vols.

Darble, J.F. & J.B. Faller, 193-1993 Ploid and Gordon Crops of the North-Western, Provinces and Outh, Roorhoe, 3 parts.

Englet, A. 1900-1917 Des Pflansinsreich Regul Vegetabille Consportus, ele Laipzig Hefte i 102

Fingler, A. & K. Princel, 1887-19; 5. Die Nurfürlichen Pflanzenfamilien, etc. Leipzig. 23 vons. (ed. 2.5 vols. incomplete, 1942).

Exell. A.W. 1944. Catalogue of the Vascular Plants of S. Toroé (with Principe and Annobon). London

Partismeth, N.R. 196: The Pharmacogness of the Periwinkles \* Fines and Catharanthus Lloyum 24 : 105.38.

Fancett, W & A.H. Readte. 1910-1936, Flora of Jassaica. London. 7 vois.

Forskal, P. 1775. Flora Acayptisco-Assision. Copenhagen.

Fyson, P.F. 1915-1920. The Flora of the Nilgari and Palmey Hill-tops (above 6500 feet) being the Wild and Commonex Introduced Flowering Plants around the hill-stations of Cotacaround, Ketagiri and Kodaikanal, Madees, 3 vols.

Guertser, J. 1788-1807 De Fractibus et Semenibus Plantarium. Stuttgart. 3 vois

Gage, A.T. 1903. A Census of the Indian Polygonums, RBS1, 2 371-452,

framble, J.S. & C.E.C. Fischer. 1915-1936. Plora of the Presidency of Madras. London. 11 parts.

Gillett, J.R. 1918 Indigafera (Microcharts) in Tropical Africa with the related genera Cyamapus and Rhyschotopis. Kew Bin. Add. Ser. I. London.

1980. Indigafera hirsuta L. & I. annagaline DC. Kew Bull. 14: 290-295

Graelle, J.P. 1789-1796. Systema Naturae (Regnum Vegetabile, ed. 13). Leipzig.

Halner, H.H. 1921-1924. The Botsoy of Biber and Orison, London, 6 parts.

Harvey, W.H., O.W. Sonder et al. 1860-65. Flora Capemen. Dublin. 3 vols., vol. 4-7 by Thiselton-Dyer, 1896-1925, with a supplement to vol. 5, met 2 by A.W. Hill, 1933. London.



# BIBLING WAPRY

phofinians, t. b. 1800-1804. Deutschlussen Flora ochre bedannans, medicinan - ast abi

Halliam, R.F. 121. A Revised Francisc of Malaya years of a contract of all over hange

Hooker, J. D. 187, 1917 The Photo of British India | Location | 1904

app the Indian found to the Imperial Caratice of the all-

Hocker J.D. & T. Thomson, 455. Pilota stolica Employa I vol.

problems, it, which the families of properties Plants is a 1 major 2 visc

Harddown, J. & J. Mt. Dutcht, 1954-1958. Pions of West Tropical Africa. d. Z. sevia, his

pursient, A. L. de. 1789 Gettern Philitarum secundam ordines montales assurant du

Kerk, J. 18 96 Cyperstreet; of Theiland (Each Correct). Reinvertiling 6 : 25.03

king, G. 857 The Species of Francof the Indo-Malayan and Chinese Countries, Ann. It

Altumera, S. 1960 Flora of Afghanistan. Kyoto Univ. Japan

Konth, C.S. 1833-1850. Estameratio Pfantarum Studigare & Fishingen, 5 vols.

honter, C.E.O. 89 -1898. Revisio Concrum Plantagum, etc. Leipzig. 3 vols.

Kurz, S. 1877. Forest Flora of British Roman. Calcuts. 2 vols.

Lanarch, J.B.A.P.M de & J.L.M. Poiret. 1785-1817 Frieschopedia Methodique Botanique Paris, 8 vols. 5 supplements.

1 '97 1823 Tableau Encyclopédique, etc. (often cited as 'Illustration des Genres'). Paris

Lanjouw, if et al. 1961. International Code of Botanical Noncentiature. Litrocht=Nether-Lunds

Lines, C. 1749-, 760. Anjournitates Adademicae (ed. 1). Stockholm, 10 vals. (co. 2, up to vol. 7 1762-1789).

1753. Species Plantatum (ed. 1), Stockholm 2 vols. (ed.2, 1762-1763; Sassimile to London, 1957-1959),

758-1759 Systema Natural (ed. 70). Stockholm (ed. 11 by J. J. Lungz. 1760., ed. 12. 1767-1771, and ed. 13 by J.P. Gmelin, 1789-1796). 1767-1771, Manifesa Plantacum, Stockholm.

Line, C. Bl. 1781 Supplementum Plantacum Systematic Vegetabilium, etc. Brumwick

F

r, fr

Makeshnors, J.A. 957. Some Name Cranges in the Electrical Trides. TJIN 45-50-804-905 that the in token and becomes sature of assure finding Pfants Bull Boy Shiry Bridge

the Stories in the Nationalized Flora of India Proc. Squares School of Bolland Ac postinger through

Malhatra, S.K., and Statigual History between degeneral mexicana and 4 ochrolesces, Cor-No. 29 212

Met unn, C. 1942. Observations on fodies Duckwards, Lemmacone. 38NHS 43 7 148-167

Melville R 1952 - , monthson programma L, and some related species. Keer Bull 261-269

1958. Notes on Alternathers, Knot Ball, 179-175

Merrill, E.O. 1917. All electrication of Remphoto Herbaroum Ambonicase. But Sci. Pahl. Vagila 9 1-595

72 126. At Empirecation of Philippine Flowering Plants, Manda. 4 vols.

934 An Enumeration of Photo Collected in Sometra by W N and C M Banghain Contr. Ara. Arb. 8 : 1-178.

vide. Plant Life of the Pacific World. New York,

Miller, P. 1768. The Gardener's Dictionary (ed. 4). London.

Morre, H.E. Jr. 1957. Mate and Entete. The Collovated Bananas. Rankya 5, 167-194,

Mokerjee, S.K. 1940. A Revision of the Labitate of the Indian Empire. RRS), 14 1-225.

945. A Revision of the Indo-Burnese species of Lindersin Afflori, 37BS 24 , 127-134.

1953 A Synogais of Indian and Burmese Polygola. Bell. Bot. Soc. Bengal 12 29-50

Makberjee, S.K. 135. Vegetation of the Delhi 'Ridge' 3BNHS 51: 439-465.

Other, D. et al. 1868 1937 Flora of Trapical Africa, vol. 1 10 pt. f. Lomfon.

Ownbey, G.R. 1958. Monagraph of the genus Argemene for North America and the West

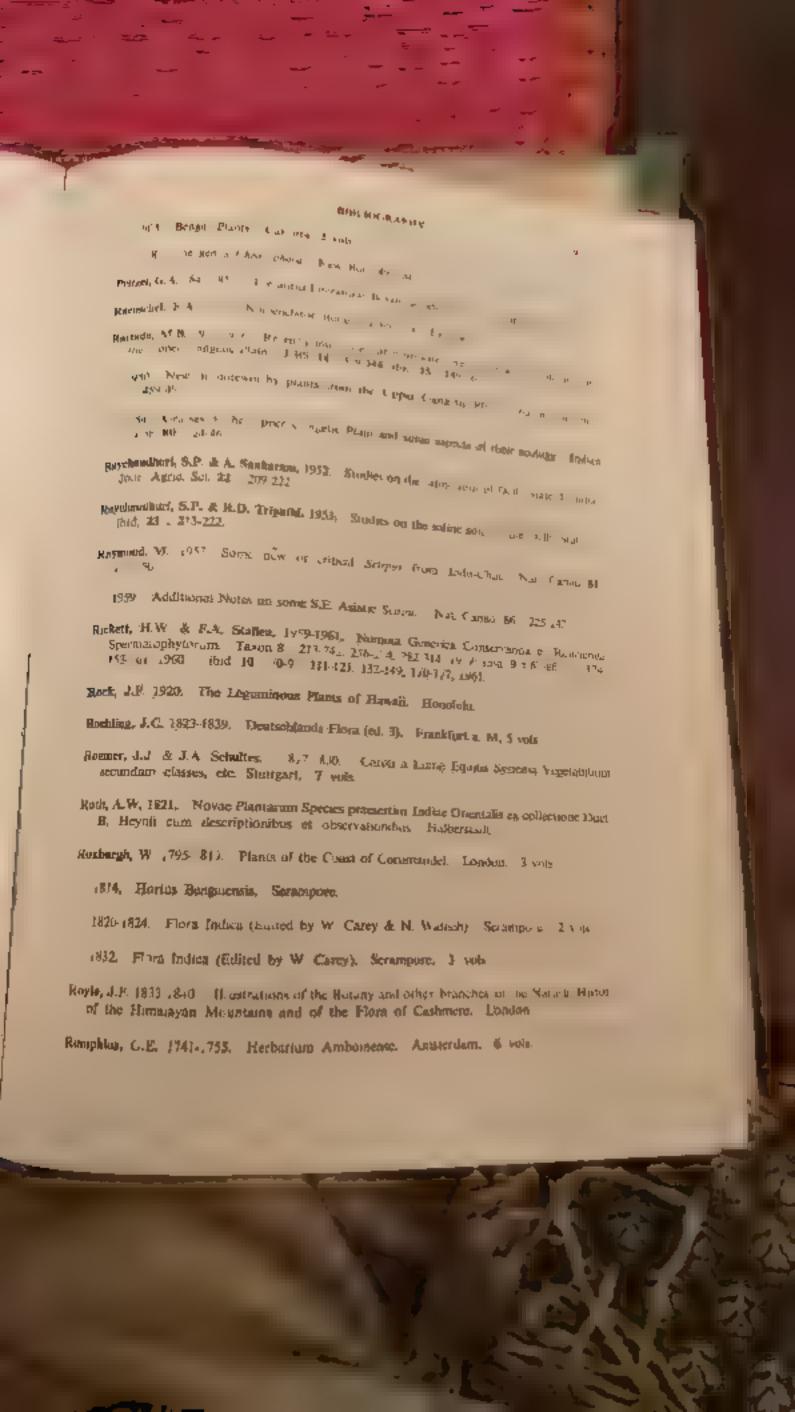
Parker, R.N. 1918 A Forest Flora for the Punjab with Hazara and Delhi, (ed. 2, 1924). Labore,

120. Afforesistion of the Ridge of Dolla. Indian For 46: 21 28.

[14] The Herbarium of the Forest Research Institute. Indian For Bus. No. 23

Pennell, F.W. 1943 The Scrophulartucese of the Western Himalayas. Acad. Nat. Sci.

Prain, D. 1895 An account of the genus Argemene Jour. Sci. 33 ; 129-135, 176-178, 207-



Sandwith, N.Y 1946. Consiste on constants Mari, a week operating in the OM World Los Dick. Keek Bull. 29-30.

Santapae, H. 1947 Notes on the control of Bombay, JBNHS 47 : 357-355

twest. Notes on the Solenacese of Bornbay. Ibid. 47 : 652-663

950. Notes on the Scrophularinesse of Bombay. Joid 49 : 25-49

410 - The Sierner Diosepres in Bombay State. (bid. 49 | 624-616

Co.2. he Assistancese of Bombay Bot, Man. Univ. Bombay No. 2

25 a most notes on the identity and noncoclature of some flowbay plants. If I had wenten Blounbur bill. IBBOIS 51 : 101-104

13 The genus Diptersembles New to India 1ndian Par. 79 : 321-123

1953. The Flora of Khandels on the Western Chats of India. RBSI 14 5 1-396. 124 2 1960

957. The Flora of Purandhat. Oxford Book Co., New Delta

962. The Flora of Saurashtra. Rojkot. Pt. 1.

Surpat, V. V. 1957. An analysis of the rainless days of Delb. Indian your. Mee. & Grount vs. 3 : 17.24.

Schneider, C.K. 1906-1912 Hibrstriertes Handbuch der Laubholzkunde. Jena-

Scopoli, J.A. 1772 Flora Carniolica (ed. 2). Victura.

Sen, A. 1945. Occurrence of summer dust over Delhi, Curr. Sci. 14: 260-261

Sen. N. 1952. Geomorphological evolution of Delhi area. Curr. Sci. 21. 57-159.

Singh, H. 1945. Some useful wild plants of the Delhi Province. Indian Jour. Agric. Sci. 15 : 797 308

Sinhs, K.L. & H. R. Sharmat, 1953. A study of winds exceeding 20 mph at Delb. Indian Jour. Met. & Geophys. 4 : 145-163

Small, J.K. 1903 Flora of the South-Eastern United States (ed. 1). New York (ed. 2, 1913

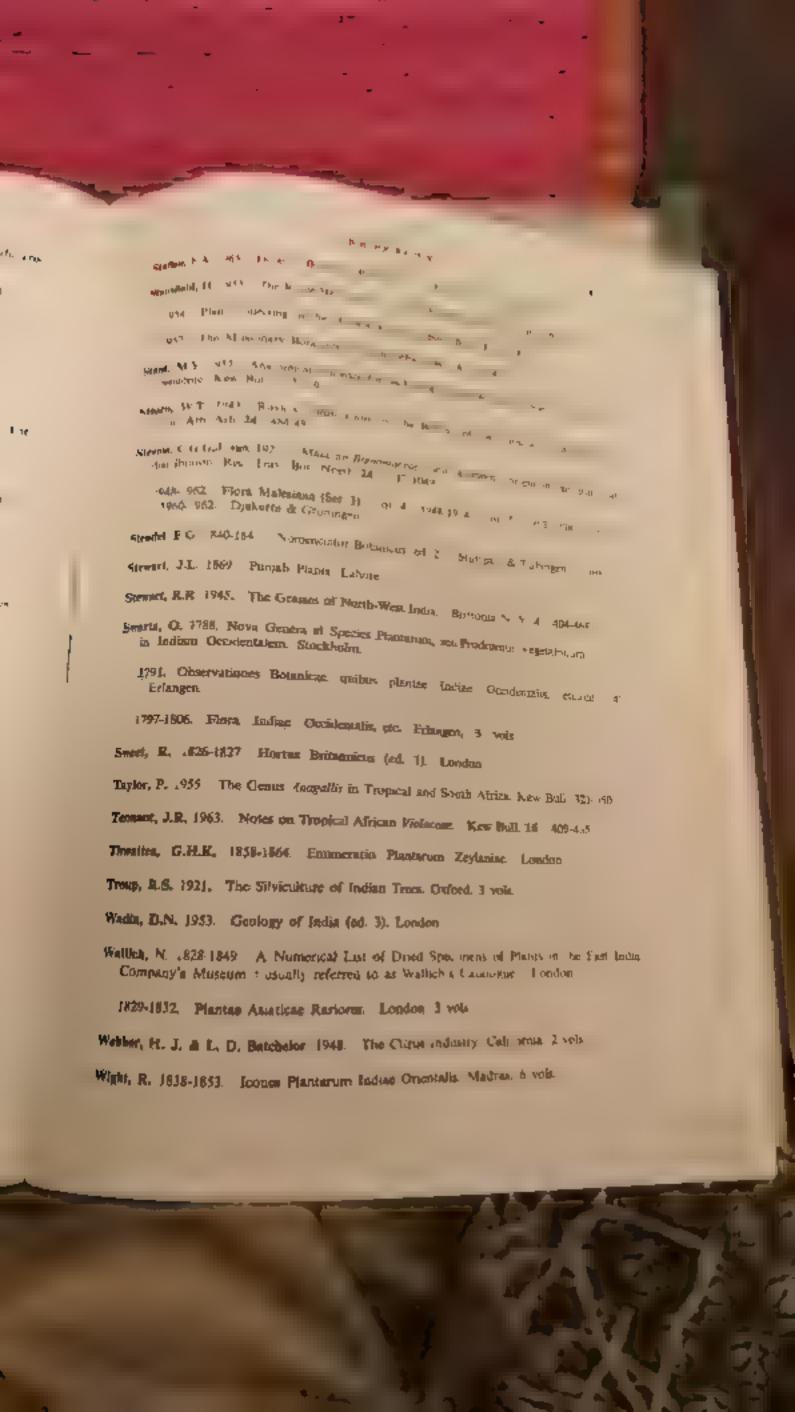
Somierar P 1782 Voyage and Indes Orientales et à la Chine 1274-178 (ed. 1). Paris 2 vols. (ec. 2, 6 vols., 1806)

Sprague, FA 928 The Correct Spelling of Certain Generic Names. New Buss, 113-135 283-296, 337 365.

Sprague, T.A. & C. E. Hubbard. 933. Ecograptis major and E. minor. Kew Bull. 15-18.

Sprengel, R. 1825-1826. Caroli Lannati Systema Vegetabilium (ed. 16). Goett ngen 5 YOUR.





THE FLORA OF DELHI

418

1840-1850. Illustrations of Indian Schany, London.

Wight R & G.A. Walker-Armort. (834) Prodromos Lionas Peramolae Indiae Orienta in Condon.

Willdenow, C.1. 1797-1830. Species Phinterins (ed. 3). Berlin. S volv.

Wat, 17 t. D. do. 1955. A revision of the genos Carrier (Caesaip.) sh according in Malaysia. Webbin, 11-2, 197-292.

We have a value and correct names of Acasta efficient Willia and Leuroring globes (a.). With Faxon 19 : 50-34

# INDEX

Symmetrical in a new neutronic interpretation of the second section sectio

	Page		
Auxory			Page
Azo	177, 214	fairida Limi,	
Abelmoschus esculentos Monach	45	1602m. ou Little	20.4
The state of the s	- 51	more and a series of the	100°
Carried Details (Original Transport	R5	Adenotallymma no on May	.41
- Aphtiloti pidentatum Martin	126	et DC	40
- Salaria	76	Adhatode vaters News	3, 1
Simple City Digits	5	(Admk)	3,3
odicum Sweet	5	Aegle mannejos Corres	45
amticion C. Don	76	telumpus lagopoules Tric. ca	
ramosum Guill & Pert	5	Distr.	782
Acucal arabics Witid	148	1 105th Ima. et C.A. Mey	(87
auricoliformis A. Cunn	49	Activa foranteo Pres. Tennta Just	794
Catecha Willia	50	tomentosa Forsk	244
chandra Wild.	*0	Acceleration Police	794
confusa Merr	31	Acechynomeno bisplacou Jacq codica Lum	1
farnesiana Wifte	43	sestion Linn	27
ferrugmea DC	150	(Afign,	74)
horride Willd	151		56
usequemonal Benth.	49	AGAVACEAE	
recophices Ward	(49	Azove contain Royb	F (A)
nodesta Wa;	149	телина Ве & Ренц	73.5
polyacenths, Willd	550	wightit Dr. dr. Prain	334
seriegal Willd	50		334
suma BuchHam, sa Voigt .	650	Agreatum conyenides Link	40
Acalypha indica Line	116	Granile varamandellana Retz.	404
Irleofor Seem	317	dianche Retz	+405
Wirkenang Much. Arg	3,7	maxima Roxb	V2
V. macrophylla N Tayl.		process Rett.	403
	1,2	tremula World.	404
V. marginara W. Min.	3 7	Adanthus cacelsa Roub.	93
ACANTHACEAE	263	ATZOACEAS .	75
Conthur maderespateuris Ling.	266	(A(wain)	177
Achras zapota Linn,	205	(Ak)	218
chyranthes alternifolia Linn	295	(Akta)	2.1
rapora v. porphyrestachya		Alburrin attura Borein	42
Hook f	299	lebbeck Benth.	131
strategical Const.	70	Silvent of the Silvent	31
co-Salogna Pittil'	70	520020000000000000000000000000000000000	,

# THE FLORA OF DECHI

420	Page		Page
	1 444	s at our Lifery	-
	151	puntralacur Linn.	295
promise Bonth.	236,237	polygonia Linn	297
	7891	apinosas Linn	206
to the national Mark Statement of August 1	(21	terope Line	297
proudsthags Daty			201
	147	(Amarbel)	231,240
ALISMATACEAE	316	AMARYLLIDACEAL	
Allium ampriogramme Line.	930		94.1
ceps Lind	336	(Amile)	321
portain Linn patroin Linn	137	(Amir) Ammania baccifora Lina	39
A loreronds comming Stape	387		6
Alog burbadensts Mist.	135	scoegalensis Lamk	ń.
perfolium v vera Littl	715	Amend request Links.	4 435
bern Webb & Berth.	115	Amorphophallus campanulatus	
Alopeaurus monspeliennis Lian.	401	HE ex Decite.	- 346
ospaleovis Trin. ex Smid.	3,55	Apophthophis pertiesa Nash ex	
Apploales Burto. I.	380	Stapf	394
Alvinia natura Roscote .	333	(Ampich) 4	96,.39
speciosa K. Schum	333	(Amra)	- 105
(Alsa)	63	(Amerood)	- 160
(Alse)	. 90	Ansygdalus persicu Linn,	154
Alsine weelle Linn.	623		234
prantate Forth.	69	ANACARDIACEAE	704
Aletoma scholaris R. Br.	215	Assaulth Atameric Line	- 104
Asternanthera echinata Sm.	298	(Anar)	+ 203
purgens HB & K.	298	Andrographis echicides Necs	163
repens J.F. Gmel.	299	wanted and a prescripts brock	- 268
герена Ещк		paniculata Wall, ex Nees	+ 268
sessilis DC.	298	Andropogon aciculatus Retz.	4 400
Uthaea rosea Cav	299	annalarus Farak.	- 395
Alu)	24	harbatus Linn.	- 388
	245	contorny Linn.	
Mu-bukhare)	154	helegensis Brot.	374
ducha,	154	monticolus Schuse.	400
vsicarpus bupienrifotius DC	125	Millaria Malla	401
longifolios Wt. & Ara.	725	persons Wille	- 394
domilier DC.,	.24	rovenne Unn.	. 37,
infloatific DC.	125	ANTERIOR HEIST.	150
Зупаць DC		shouthful Hook L	+ 402
· Quentinglarifolius Bakes	F24	- ALMARIN KOXD	
skum cochlearloides Roth	125	Ancibum graveolem Linn.	373
I, which was the fit	59	(Angur)	177
M(tes)	+05		103
	143	Anisochius carnosus Wall,	. 288
ARASITIES		All Gomelet andrea Vancous	
ARANTHACEAE	70.1	The state of the s	500
ranchus butum v oteraces	293	(Anjan)	. 289
AND I		(An)han)	377
Welleut Latin.	297		377,378
Citi Daf	297	(Anjiri)	. 328
ridus asp. oruentus v. panieu	297	(Anjiri) (Ankh phod ki bel)	327
itus Thali.	-	(Ankh phod ki bel)	347
	30.0	(Ankta)	100
encholicus Linn.	296	Annona squarrows 1	. 2,8
псеня Willd	297	Annona squamoss 1 mm.	. 51
	297	ANDON	
		ANNONACEAE	. 31
		7 4 4	4 31

(An (An

Am.

gra byt

met Oler

	PONE	×	421	
	Pege		lless	
Алендония выполняем Ман	+1		PAR	
Perfording digitals	10	Michaella Rose	12	
Anthorson their mattern barre	323	Alterna	254	
Charleton's depositant outs	11	Carry and approximation of Maryla	nd S	
Actionation improper blook & Arm	107	god from 3 mily	46	
Amprehimmo orra men luga	210	The carrier Line:	461	
Acada CA mhai	3 2	Continue and Cody	44	
	2 2	Attended to Penghatens Druce	51 ·	
Acang	149	was the North St. Stewart	405	
Article.	76	Arutide Jonas Lipp	1.7	
A 104 4 4 4 4 4 4		maxima harsh	8.2	
AMACEAE	1.30	Missemples action	7.	
Apluda prista a Lann	ÇA P	(Arasa	277	
materia y anteriora Philipper	059	Okre	544	
Parla V. Arktinta Hack	1459			
A framework a service of the service		ASC LEPIADACE AE	2,	
APOCYNACEAB	210	Assertias assámplaca Liga	726	
Apocymum fratescens Lann.	2,1	Alterion Fuedi	2 0	
Aponogeton manestackym Law		pullide Rearb	2,9	
ſ	344	Macria Aut	2.8	
nainns Engl & Krause	349	canally Forsic	2.9	
		(Autom)	242	
APONOGETONACEAE	348	30(3/#90)	52 39	
		Asparagin recembrar Willia	136	
ARACEAE	345	Aspeodelus terrantos us C4v	337	
Arachis hypogen Lien	25	Asternanetha unngifolia Noca	267	
Atund	3.6	Penning angitous 1-101		
	, u	ASTERACEAS	183	
ADT CACOAD	341		784	
AREC ACEAE		No. of Concession, Name of Street, or other party of the Concession, Name of Street, or other pa	34	
Arenaria serpyllifolia Lino	69	Atylosis elongata Beath		
Areoga ascebarifera Labili	343	Assistant management Builti	2.5	
krgemoge mekicana Linn.	5.5	Амела Буганияа С. Косћ	399	
ochrolauca Sweet	55	sative such a way a		
Argyreia nervosa Bo;	23	BOTTO LABOR	349	
speciosa Sweet	231	steroty Lane v colta	. 399	
Athari	34	Averrhou curambols Linn.	, , 92	
	198	Annaces Indiana Beaut	387	
Minute adacensionis Linn.	399	Assibi actua indica A. Just	49	
hystria Linn. f.		Apollo pinente R. Br.	20	
petacea Rete	196	Appeal positive re- per -		
ristologhia bractesta Retz.	308			
elegana Mast	303		*	
and distance and an artist of the second		(Babul)	14	
P. P. P. C.	306	(Sachelor's button)	. 29	
RISTOLOCHIACEAE	156	Bacopa esongeri Penneli .		
lirjun,		(Badber)		
rnobia hispidissims DC	227		7 7	
(traf)	264	(Baherii) + + + + +		
rtemisis hemisphaerice Roxb	200	(Bat sucui)		
	191	(Bain-champa)	1	
maderaspatana Linn.		(Baingan)	. 2	
scoperia Waldst. & Kit	700i	(Carringsty)		
riocarpus heterophyllus Lamk.	322	(Sangan-katti) . · · ·		
the and hand	172	(Bajra)		
integral auct.	322	(Bakanbuti)		
Integrifolius BUCL	2 9-4			

# THE FEDRA OF DOIST

M.

ıt.

 $(\theta_0)$ Batal 401 VII. Vη Вецир  $\epsilon Bac\epsilon$ (Bekg (Bet) (Bela) [Belpa

1		Page		n <sub>age</sub>
		20	diengo terror	14
Half a shirt		44	Hammonsa certifera basil	5k
		36		51
Englishme Scanfeson mare at a con-		199	(Bet)	112
Habitroha.		100	A recent thorntell Linn.	19
Mail with the fifther		448		2
na Foto of		4.6		-02
Man sha es Ann obs who		10.7	r Hote atth.	244
Figure 15 to 15		160	(Barsonni)	4.4
Hamand		24	Beta volgaris Linn	900
Dana		107	TO THE PARTY OF TH	54
Horn arrivings		90	(Bhasambhar)	9
Banobagobio		60	Rhang <sup>a</sup>	130
Bergener winghmenter I offit.		-53	(Beanita)	191
Barn		300	(Wanker)	9:
Bansa	231,		(Bha bharra	123
Dansi		+01	(Bhas La en	246
Ramorea.		286	Bhendah	স
Bargau !		24	Bhurat) 19" 245.	300, 11g
Marh		724	Bharchite	97
Barba?		122	(Bichha)	9.7
Bari)		6.2	Bideni bisernata Merr. & Sherff	197
Barleria cristata Linn		7.4	priose auci	198
v dichotoma Prain		14	Beginnin adenoyêyila Wil	250
dichatoma Roxb.		1 4	eagens I bunh	26
longifolia Lonn	2	367	chambeeld will Soms	261
ENTORING LENG.	- 2	274	grandylard Thunb	262
(Harley)		26	peningkella Lunn	257
Barlu	3	95	resident Linn	
Barna) , ,	66, 2	90	eners Lann	261
(Barotey		24	voidalata Sm.	258
Boru.	- 44	00	unpus-car Linn.	257
Basella alba Linn	3/	34	rouse het Gawl.	260
ruben Lion		14	Supplies seed -Catholi	260
	-		DICHANICA	
BASELLACEAE	30		RIGNONIACEAE	256
*Bakeni ay			(flubsad)	75
Barna latifalia Roxb,	20		(#Bkitafra)	293
Despite	20		duter gourd)	27 169
Bararas edulis Chaby	27,	2	( INACE ETAIN)	
Batha)	2.3	5	(Black mustard)	26, 132
(Buchua)	300		Blainvilles Intifolia DC.	27
Rat. II. non-man-	103		thank-life OC.	198
Baultinia purpures Ling.	138		thamboldes Cam.	198
**************************************	137		Charles Sales Charles	166
**** 特別 建 為 機			The state of the s	326
- 1 1 1 E 2 T E 1 1 E F E	131		Perpending Saperculus Bases	
Bendmontta grandidora Wall	332		PONEROVIDE India Date	267
was, 1000 k	212		Charlemanning at	265
Bekeni	27		maderuspatenels Hoyne ex Roth	266
Bet:	272			267
Sela)	96		Catalan Cardio Catalan	407
leiparea)			THE RESERVE OF THE PROPERTY OF	
estatist)	203		* PHRITORY (*)	195
	96		pylomete DC	195
				195

#### IS DON 47 Page lectors The Hepr the major the 23 10 we many Injuries Stere they ar 26 wirlig ad Partier Bro-sectioned purposition Vent v. mindices Mahanh 2.5 monthstone bring. 134 mental of the 1941 the energiate office 164 Machine Inc. 4 give a magazina and traders in these Andrew Carlo Bourton in untique Lines. 495 proceedant Rock 495 Buchbuch 62 444 254 repaired at 10 to 240 Access a capt provider bath. 250 Deliverate HILLS (Burnstein SHE Buphale (But has the Cathage 84 Вольбера выдама с по-BOMBAPACHAR Chalemana Fort 10.5 Brombox months from DC na lazakatemen Lamb Roma: a fourhesta Link & Otro-10 (Back ५० ।()१ ५) 4 Devoted (Davage 750 (B)/26-17 DORAGINACEAE Brobers its burbata Ci-Воггетта Бізріла К. Вебин 224 (Bu hash made) 2.4 atricta R. Schum. 180 BUKSERACEAE Boswallia scerata Renta es Colche **QR** Bothmochiba pertissa A. Camille 46 Butter Greening Reals 30 174 писточности 7 вор Bortle-brush) KI. 15% Princip States 67 Cabpage Bottle paimit 144 Bouchea marm telefolija Schati. 3.9 CACTACEAE Bodgajoviliež globra Ching 177 242 Catalogue tonde Rock . spectabilia Willd. 144 bendaretta Flora. 292 144 Brachiteria districtiya Stapf 398 crista Long. 144 mutica Stapf 307 politherring Su. 144 famosa Stapf TOP rentans Gord & C E Hubb 19" CAESALPINIACEAE (Brahasi) Camaba assure Rosb 142 Вляхнив світренути у нагосії Рігані 61 Capazias dajan Malap ч junces Czem & Coss 174 01 Indenii Spreng Junera Hook f. & Thoms. . . 155 61 (Citys put-tree) nigra kloch. 67 Cau arps longifoha Lamk 28 Aleracea I no 60 mac cophyda Yalu 24 v. betrytes Lane. 60 Calesternos tancertares DC \* K v capitata Linn 60 237 Caus can musicatum G. Don v cantorapa DC 5 Cativeropis process R. B. 2.8 v gammifera Zenker 61 Campan granvisitora K. Schum 60 гира Сили. mancians Seem 26 tournefortà Gouan B. (Canale uper 257 CANNABACEAE 329 56 BRASSICACEAE Breynia shamnaides Mueli.-Arg. .. 319 324 CANNABINACEAE (Briddi dreeper) 230 a291246 Cannabas sative Linn (Br-njal) 595 Brise biplicate Linn, CAPPARACBAB . . DA. 184 engrastic Link. .

#### DR. FLORA OF OTCH 424 Pape Pag substantian cuttle loss Line 8 His 61 meerle ara Durch CAPPAR (DAC) AL 4.5 Company and his Ruth CASCARINAC AS 47 december Edgew Ca ha anthro product G. Do-23 wednesd less 65 A ex C Det William Rosh 252 27 67 Carriffone igrowing the lightest I light Са заба аппоза Суприр 112 90 Cedelo inono Roch en Rotth & CAPRIFOLIACEAL 245 100 Сариалия извидет была Wille (Caramba a с непомрестиять Нопожования CELASTRACEAE 101 0% C-farrens semegalensis Lamk an. LIGHT 202 Color a imported Limit Furthers remount Rost 20 150 Cares feins Nees Checabia Fillian 204 140 publichana Presi ex Nem Concer magnifeliants Vah. 2451 (64) Сагиш дарыуя Енап-Celtos austran Little 37 Concepts Medianis Hork F 75 INCOME ROSE CARICACEAE 2. Carlesa carenalus Linn 7 % rankseriens Deltie 1 3 apmanum I ido. conaris Line 43 (Camero 337 petrgerus Taff? 200 Curthamus dayacantha Bleb Семляний сатология 201 unctarius Tunn 227 Dinge Согина сырваетия Ніст Centella asiatica Urbande. Copholomico Indica Naud. 171 68 CARYOPHYLLACEAE 290 Curyopteris warlichiana Schau-CERATORN'S LLACEAL ٦, 41 Curyota ureas Lian. Consophyllum dementum Lina 335 Causia artemisipides Gaudich, ex certicillatum Rosb 35 140 DC Cerbera persentana Pers 2 4 143 corverbour Lamk increase Lipp. 41 2.4 наутованув Егент Certospera sp. 2 8 4 cremophila A. Curro, 64 Vog. 43 Ceropegia bulbosa Rosh 220 fastigiato Vabi-Centrum avacumum Linn 142 247 Garufa Lind 247 43 patque I. Her. Poribunda Cav Chaben i 42 88 glunea Lamk 42 (Chabok share 217 Javanuca Lina. 143 Chadara reads Firtsk Inevigata Willia. **KT** marginata Roab 43 Charteria kyzir i Beaux 399 nodusa Buch.-Ham, ex Roxb. 142 (Chakerra) 94 obovain Collad. 140 (Chakowart) 141 obtusa Roxb 40 (Chakur) 148 objustjolia Ling. 141 Chalcus pantrulata Linn 97 occidentales Lenn 444 (Chamele 208. 2 6 pumilis Lamb (Chamela 14 2534 ferrigers Was 142 (Champa, 51, 214, 215 rosburghir DC (Champameth) 145 93 Marties Lamb 143 (Chana) 126 sophera Lina 141 (Chanden bethow) 302 swattentis Burm, E. .42 (Chandian ) 114 tora Lutn. (Chrodni) 41 215, 216

րոլե

'Ac

(t.) 4-1

ķ

(t

¢

Q.

1)

Chapitar )  Chapte mare   I Adre Sp.  (Challen and the Chapter of	n <sub>age</sub> 30 100
Chapta mara  I have 50.  (Cha gwa.  Chatra-mara)  Chatra-mara  Chatra-mara)  Chatra-mara)  Chatra-mara)  Chatra-mara)  Chatra-mara)	30 100
Chapte mare 175  Adra 50.  (Cha gwa.  Characa 125 (Chapte 125)  (Characa 125)  (Characa 125)  (Characa 125)  (Characa 125)  (Characa 125)  (Characa 125)	190
Character tabularia A, June Character tabularia A, June Character tab	
Charachara tay	
Who contacts and accordance from	297
(Chg r matte)	.7
147 4 m frag	
AND AND ADDRESS OF A PARTY OF A P	199
to the most of the Dig.	70 20
Charles 403 Cretampelos parents Lines	87
- there is a state of the state	278
ave 10 TE NO	45
CHENOPODIACIAE 100 CHENING School School	¥70
Change ordered a burn to an	47
umbrosiones Linn	A.
Agricultura A. School	71
Continues in Lines - Interpreted to the Property of the Proper	
mark throng com 303 Cotrus atmantifolia Swingle 303 surantifolia Swingle	05
murate L no 302 deservations	44
Chichinda) (67 grandis Osbeck	94
(Ch kras-	94
tChr 26 248 firmen Burm, f.	95 93
(Chimi 295 maxima Metr	94
Chimbar 9 medica Limi	Üs
(Chinese (allow-tree) )11 v tomos Eme	. 95
(Chircl *th) 197 198, 203, 246, 300, 378 Clausena Isranum Skeets	
(Chiretta. 13 wangs Branco	96
(Chiriya-hajra) 312 -orga Otro	
(C'armethi, 248 Cleone brachycarpa Vah	
(Chirmotha) 245 DC.	63
(Chirmshi) 126 grandes fann.	64
Chloris barbota Sw 388 vacosa Lina.	63
dolichostachya Lagasca 35° Clerodendrum fragrana Vent	
gayana Kunth 368 indicum Kunize	
Incomplete Roth 38" therme waters	Bull
tenella Koen, ex Roxb 375 phiomidia cinn (	200
villasa Pers. 375 supengarinus R. Br	284
v rgata Sw 388 spiendens G Don	204
(Chonch) N9 Chioria ternates Linn.	. 13
Chorisis speciosa St. Hill 83 Calcus arecans Hoffm	201
(Choriya)	
(Chota kamai) , , , 54 Coccinia cordifolia Cogn	
(Chowpatti) 347 indica Wt. & Arn	173
Chrozophora parvifolia Klotz, ex Cocculus hirsutus Diels .	52
Schwith 315 pendulus Diels	36
plicate f 3 Hook, f., . 15 villosus DC	
prostrata Dala, 315 Cochicaria cochicarioides	- ,
market file & S	59
Chrysopogon sciculatus Trin. 400 flava BuchHam. ex Rosi	295
fulyus Chiov,	
Chuamia) , 147 Coldenia procumbens Linn.	225

P P Vi Chr

(Chi

#### THE PLONA OF MECHI \$70 Marine. Page Consciopes didymes Sm 45 ыs С масимы инперсмент барых 76 IE meine МS Consis hemisphierica Wall, ex excidence School Bench & Hook f 496 155 YHATRE PACEAS Corella glamerata M q 320 440 Commissiona henghalester Loan (Campos) 26 140 tomasili vajdi. Cracce purparee Linn 12 140 Cratacoa marmetas Lion bgstäarh C 46 1.9 Kurm (3) numals Buch Ham 03 religious Luci 63 1,19 COMMELINACEAU Crepit superiors flevels HX Crosss cretics Line 230 8.5 COMPOSITAE Страт анансыя Кохв. 1.4 457 Спросогова всимінары Roab. dehaum Kat-Oak Crossandra axilleris Nots 214 229 CONVOLVE LACEAE infundibuliformis Necs 290 2,40 Croytily alus almondes Limit undulaefalm Salish 275 239 arvenus Lann Crosmania burbia Birch, Ham. 235 Burator Front JAMOBE LIDE 1113 23A distant with function area medicagines. 237 repriner Lum 112 Many or 1 235 herpidas Vah mysorousia Roth 3 23.1 martentus Luan. MITCHE Retai 1 231 ingripoyage Bounds I Croton bonnlandsanum Ba-315 215 all Lines manufactor Marong. 316 observes Limit. 136 percenter Desc. 134 339 CAUCIFERAR perforthur Jacq. 56 272 Cryptostegia grand/flora R Br planicaulis Choisy. 211 2 7 purpurate Line Crenotepit gatum Cl. 66 reptons Lann. 24 Cocumb ocutongulus Linn. 168 234 sinensis Dest 🗼 🔒 enlocemble Long. 741 moderalpotones with turperhame Latin. 231 166 meio Lun. . . Conyze degyptoma Dryand ,97 169 renered Lang. 90 v. momardica Duthie & Fulwcera Burm ( 94 TO fortigista Roub. . . - -196 V. Makartin Duthie & Pul-Coral creeper) 307 ker , 70 Corchorus aeugangidus Lamk 89 satisfas Linn 77) nestuana Long. 89 wedtastimus Roxh 170 murchorus Raeusch. Cocurbus eteratias Unn. 88 71 captularis Linn. 89 eupula Thunh. 168 Jepressus Stocks . . . 88 Jaycoaria Linn 167 olitorias Linn. 34 maxima Duch. 72 trajens Lan. . . . 89 moschata Disch, ex Poir trhocularis Linn, . . 172 80 pepo Linn. Cordia dichotoma Forst, f. 172 227 myze suct. plur, . CUCURBITACEAE 27A philipun Willd. 165 228 rothir Room, & Schult. 27 Commun cymiaum Lan. 218 Corenpsis hisernata Loue ,79 Capressus sempervirens Linn. . . 198 (Corrandee) 3. Custuta hyalina Roth . . . 27, 179 Coriandrum sativum Linn. 240 178 redexa Roxb. 240

FFL

CAR

40

al la l

of the

 $t\Pi_i G$ 

 $\epsilon S$ 

. 55

5 4

ng,

des

 $er_{\rm h}$ 

30

m

d,

1

C

The Pile C

Indibility. Page CUSCL FACEAL Cyaniques providentes DE 246 Page. ant agricultube Lacib Between ! 116 Cyantonia on Barra Schools F.  $t_1 z_2 d_{m,2m} \otimes_{m} P_{k2,2k}$ Prographic analysis for their C you recolute Chamb Mo. Committee of the Real Prot enquerism bediener Burn f. A mideric 42 Leading to a section. Brough physicism hoscions & octab-220 Section Rouge Clyna to adolymus fram. 421 (Danger ha tames y Cynodon deciylon Para 202 (Dantura Conngiousum sanotolatum Forsk Poly. Datata who Need 100 22" roccanthion Doul. office Stumper Cynamus arrypthus Linn 22" fustamen Line 302 Imboto Lune Y alba \$3 101 manages More CYPERACEAE mete Linn. Cyperus siopeouroides Rotth 349 44 mile Sum alternifeitus up flobettiforms 352 Юаш, из сапры — пл Donasi big. a . a mosifingly W. A. Kutkenth. 154 articulatus Lang. Azn. 355 (Deta) utkinsoni. 🗇 20 35 Octobra regue Raf. brev/olius Hawk. 154 Description (alcala Enings bulbosus Van 47 . 54 Dezen scandens Benth. cephalotes Yah 353 Doublett Bebut compressus Line 16 Dun budami corymbosas Roub 5)-335 Dest papri) enspiduter H.B. & K 220 354 Deterodiem gangeterum DC difforms Lina-344 puzudo-triquestum BC eleusinoides Kunth 357 ashorum DC. Sabelliformis Roub 114 Contraction of the ria Lann. 357 Deamostachya bipinnata Stanf kyllingta Ende 353 (Dhab laevigatus Linn. Dipathan) 352 michelianus ssp. premoeus As-Dhadiat chers. & Gtachn. 353 MOSTOR monocephalus F. Maet. 113 (Dhalt la bel 731 Dhana) monostachyas Linn. 359 nivolat Retz. 354 (Dharati-dhak) 264 351 243 244 nutang Yahl . . (Dhittern 300 v. eleuxinoides Haines. 357 (Dhawaiu) 'n 152 pumilius Linn. pl. 312 (Dhesar pygmaeux Rotth. n, 356 (Dholimundi) rotundus Linn. . . th. 353 (Dholphub) triceps End. ) . 294 184 354 (Dhotphater) unconstan Port 57 THE DESCRIPTION OF THE PERSON 134 Cylina egian Lint. . . . . 97 (Dhuanst) 135 pinnerus Linn. 269 Dissiliens bicelyculate Reiz. 395 Dichagthium annulatum Stapf Dichrostachys cineros Wt. & Arn Me 396 (Unnb) 202 Dicoma tomeritoss Cam. 174 122 (Daubsult) (Endhen) 382 295 Daciyilit lagopoides Little . . Dogera alternifolia Aschera. Dactyloctentum aegyptium

428 THE	FLORA	OF DELIN	
425	Page		Page
			215
processor Forth	295	Echica arhibiti is 1 nm Essectionishis Bushk	49.9
Digitaria adacendens Henr	389	erecto Lino	91
corymbons Merz	340	terrola Lann I	198
potenza Henri	169	prostrate Lion.	9.7
Andreas sink	389	Ehretin acuminata H. Br	2.7.8
murginatu v. mmbriatu Starif	190	aspera Welld	239
sprigmouth v marginara term	1.27	(agelt Real)	224
setigera Roll ap Roent &	389		**-
Schult	27	FHRETIACHAU	227 538
Istomecorpus Irrela Latur	94	Eschhorata crassipes Solms	-38
(Dio ka tara)	300	(Elachi)	347
Dioscorea bultafera Lina	115	Elote sphesicis Linn.	341
cliffornana auct	335	and a service of the land	72
satira Thunb	335	ELATINACEAL Kunth	358
		Eleocharia atropurpuras Kunth	758
DIOSCOREACEAE + - + +	335	palustria R. Br	27
Orospyrou cordife ia Roub	206	(Elephant foot yarn)	392
embreopterii Perk	206	Eleusine neg prin Det!	302
mantana Cl	206	compresse Aschare, & Schwith	190
montana Roxb	207	flagellifers Next	390
meregrana Gürke	206 337	Indica Gaerio	391
Dipendi montanum Baker	273	nadra Duthie	392
Dipteracenthus dejectes Nees	273	verticiflara Roab	36
patiens New	273	Eloden canadensis Michx.	33
prostratus Nets	273	Elytraria ecsulis Lindau	265
the decrease of the decrease	252	(Emble)	29
(Dodf)	155	Embles officinalis Geertn	320
Dedonaea viscosa Jacq.	103	Enderpopterts peregrina Gaerto	206
Doughos ablab Lan	132	Enicosterna littorale Bi	223
ниминя L пп.	133	verticillatum Engi	223
smensis Ling,	133	Ephedra	221
Dombeya acutangula Cav	#6	Equiseium sp.	19
cayenalt Hort.	\$6	Eragrustiella bifaria Bor	383
mastersu Hook f	86	Eragiostis bijaria Wt. ex Stoud	383
natalensis Sond.	16	cilianensis Link ex Liniati	384
waitichii Juck	86	citaris R. Br	385
(Doob)			
Dreges volubilis Benth, on	4, 444	v. clarkei Stapf ex Hook f	385
Hook f	219	cynosuroides Beauv	195
(Dodhi)		diarrhena Steud.	386
	313	interrupta v. diarrhena Stapf	
(Dudh(bel)	313	exHook, f	386
(Dudhai)	313	major Host .	384
Duranta plumiert Jacq.	279	miner Host .	384
repens Linn	279	pilota Beauv	385
		possoides Beauv.	384
		tenella Roem, & Schult,	386
EBENACEAR ,	206	v. viscose Stapf	386
Echinoch og colonium Link	393	deservate franksis	504
crusgalli Beauv.	393	Ademana Total	384
Echinops echicatus Roxb.	200		381
111111		Brantheanum nervosum R. Br	275



## $n_{00\pm x}$

	Palife		429
Friends of processes Raumala	375	_	п
revenue Beaut	376	Fagura and distance a sum	L. Hiller
Engeron bonationals Lusp	3*1	CONTRACT LAND	ų.
canadenses Lina	190	Character warming neuron between	41
Anti-thus Would	171	t area bean	Jan.
molle D. Den	193	Tarashan.	3
whigher I san	195	# discha parouting	(13 PD
I выботув провіси I від	173		59
Istochica purposa rea Metric 1	405	Chambrer,	21 11
process C. I. Habb	401	Personal replantation and Ed	6
Eriophorum communes Wart on Nove	365		96
Ersejámia coronuria Stani	62	General philosophia van	1r
Ereun hirstetum Lann	2.6	and and a	40'2
Erythraea ramosissima Pers	127	FICOIDACEAE	4-4
Erythrina blakei Hort, en Parke.	223	f - a bemphalennia Linn	7
caratodendron v orientalis Lian	+ 10	beste Total	3.4
(edica Lamk	+29	being thing to different to the	74
nunospernos Lamb	F29	Cartroyles Rush	25
xuberosa Roab	96	comora Roxb	327
varlegate V. Orientalis Merr	129	cordifolia Rosh	324
Eucalyptus camaldulenus Debah	129	drupaces v. pubercers Corner	126
citriodora Hook	59	charica Road.	324
groboles Labra	4.3	Di meraja Rijah	328
paniculate Sen.	9	Professon Roxb	326
rodrata Sch	159	radice Line, ernend, Lamk	126
rudis End.	152	reference Willid tensu Roats	324
tereteornia Sen.	19	r fumbertiene King	527
	14	krishner C. DC	327
Eugenia jambolana Lamk	60	form nucl	324
Eulalia nepal ensis Trin	3.0	memourne Line (	327
Euphorbia clarkeana Hook &	3.3	economia Heyne ex Roth	325
dracusculoides Earnk	3.2	V puberceur Roth	324
geniculata Ortog	312	Par management of the later	324
granulata Forsk	3]3	rengers Lunn	327
hats Linn.	3.2	fernia ann.	325
hypericifolis Lina.	3.2	SDEER SAND	325
mill. Ch. der-Moutins	4		-26
serufolia Ling.	31.	sarophila v Imbianceolata Miq	327
nivaho BuchHam.	6	See Ford	325
pilalifera suct.		virens Ait	327
	3.2	v sublanocolata Corner	327
prostruta Ait.	3 3	V Virgins	327
pulcherrima Wald, ex Klotz.	3/1	ruzata Roxb	327
spiendens Boj. ex Hook	311	(Fiddle wood)	278
thymifoan Linn	313	Fimbristylis dichotoma Vabi	359
		diphetta Vahi	359
EUPHORBIACEAE	309	(errogenes Vahl	350
		_	369
Evolvulus atsinoides Lorin.	230	junctionnis Kunth	
Excoccurio sebifera MueilArg.	3(7	monostachya Hassk	359
		quanquangutarut Kunth	360
		spathanea Roth	359
FABACEAE	106	tenera V. oxylopis Cl	360



## THE FEORA OF DELHI

430

	Pag	se = = = = = = = = = = = = = = = = = = =	P <sub>RAB</sub>
Fine utrus patris Merr	6		290
greed which is the	6		73
awayship, 1 for	- 6		
marine H. Switt	0.	t je zje be amaranih asztebe urtáchnikaj	29 <sub>K</sub>
FEA R TACE AT	67	to be a second as Table	207
name in the Forest	4 2	Hineartform Cast	14
P.D. W.	26, 90	suppress agency small countries. Are	
annotess propuliflora Rosh es		es Hen h	4.14
Rott	26.5	Gleeter tobiolis Linn 1	211
AM ne salk risc	JII	Cantelina arbores Royo	787
Theregers have grown Wolld	7 R	horre e Schult 64 Kutz Indica Burns, f	282
denotes analog III	17B	philippensis Chaos.	6
Fig. (3) (a.k.).	272	Gnaphahun office D. Don	2212
unit to indica Pagaley	56	indicate Line	5 44
mireford Wil & Am.	56	loteo-atbum stp affine Koster	124
no, willowh Hook F	56	v multiceps Hook. (	94
V viillantii Hook, f. & Thoms	. 36		194 5 180 189
utlantii v indica Haussk.	55	(Gejn)	296
		(Crokaras)	1
FUMARIACEAL	16	(Gokhru)	34
Function of	376	(Golden rod)	4
		(Golden Shower)	260
		(Goma)	290
Carriaghus	397	Gomphrena celesiondes Mart	298
Casamba L. ber	171	globest Linn.	297
(Cajar)	17B	sessiffs Lann.	299
Galega villota Lina	121	Cometas saccharifer Spreng	343
Gaiphimia gracilis Barte (Gandar)	97	(Gondi)	228
(Canthgobha)	462	(Goodes)	88 228
Gardens florda Lian.	6.	(Gepha)	290
Jesmmoides Ellis	183	Gossypium arbereum Linn.	82
Carrie)	133	herbaceum Linn.	82
(Gs bhanjan)	27 337	Ausutum Lann	82
(Crawar)	181	Gracilea sayleana Hook. [	
(Gedua ki cha.)	176	(Gram)	375
AZT-E-A	294		26
	176	GRAMINEAR	
Gendariasa vulgaria Nees	270	Grangea maderaspations Post	363
Gentiuna verticillata Linn.	223	(Grape)	[9]
GENTIAL COLO		Graphiala phoenicle Post.	103
GENTIANACEAE	223	Gratiola ciliata Colum.	343
(Ghainer)	23,	pariffora Roxb.	253
(Ghathiyaghan)	187	(Great mades)	253
(Ghiabuta)		(Carry	26
(Chighito)		(Green gram)	26
(Ghiabel)		Grevilles robusta A. Conn.	308
(Chistory)		TIEWER ASIATICA LIND	
(Ghoyan)	100	helbiurfolla Jana.	87
(Ghurnehi)	343	Savescens Just	87
Gisekia phacascooldes Linn.	126	Pllose Wt & Am.	87
Trible Citti	173	populifelia Valu	87
			87



Мару

Country Countr	Finance of the second of the s
(Couching Couching Co	75 2. - - - - - - -
Couching Cou	a. H NP
Couching the material of the property of the military form of the milita	4 4 4
To a mohar the open on the tenth of the mohar that the open of the	H ND
Co. mother Cold doolse) Coldish keals Collish	H ND
testatable keap) testat	H ND
Collabbas   Collabbas   Collabbas   Collabbas   Collab	H ND
Collab.  Col	H ND
Cotas  Co	H ND
(Contract)	SD.
(Control )  (Contr	SD.
County (County)  County	SD.
Count,)  Count,)  Cynum partie montain Benth.  Spinion F (or  Cynandropais Synandra Bing.  Pentaphylia DC  Haematoxylon  Cumpechanon  (Halas)  (Hal	
Cytheorparid months Benth.  Spinion F (or  Gynandropais gynandra Brig.  Pentaphylia DC  Haematoxylon  Linn.  (Hala)  (	41
Oynandropais gynandra Bing,  Pentaphylla DC  64  Haematoxylon  Linn.  (Ha.a)  (Haliwa)  (Halo)  Halopyrum mocronutum Stapf  Hamelta evacto laco	
Oynandropais gynandra Bing,  Pentaphylla DC  64  Haematoxylon  Linn.  (Ha.a)  (Haliwa)  (Halo)  Halopyrum mocronutum Stapf  Hamelta evacto laco	H
Haematoxylon campechanon surattensis Linn.  (Hala)  (Haldwa)  (Halo)  (Halo)  Halopyrum mocronutum Stapf  Hamelta eracto laco	82
Haematoxylon campechanon surattensis Linn.  (Hala)  (Haldwa)  (Halo)  (Halo)  Halopyrum mocronutum Stapf  Hamelta eracto laco	IIC-
Haematosylon campechanon schmiperalus Hook f Linn.  (Haia)  (Haliwa)  (Halo)  Halopyrum mocronutum Stapf  Hamelta eracto Jaco  Schmiperalus Lone  schmiperalus Hook f  schmiperal	840
Hamble Compechanon Stapf 407 Hiptage benghalershi Karz	71
Linn.  (Hala)  (Hala)  (Hala)  (Hala)  (Hala)  (Hala)  (Hala)  (Hala)  (Hala)  (Hingot)  Halopyrum mocronutum Stapf  Hamelta eracto laco  (Hingot)  Hiptage benghalensis Kara	408
(Hala) (Haldwa) (Halo) (Halo) (Halo) (Halopyrum mocronutum Stapf Hamelta eracto laco	4()
(Hahiwa) (Halo) (Halopyrum mocronutum Stapf Hamelta eracto laco (Hingota) (Hingota) Hiptage benghakasia Kara	71
(Halo)  Halopyrum mocronature Stapf  Hamelta eracto Jaco  Hamelta eracto Jaco  Hamelta eracto Jaco	
Halopyrum mocronutum Stapf 407 Hiptage benghalenshi Karz	81
Hamelta eracio luco	98
Hamelia eracio Jaco	48
	(A)
patens Jaco masepurs Gaerin	41
Hamiltonia susyentene Bank (Hugakhuri)	2.0
Harlophragna adaparhatta a	28
Don	6
Hanloohroumani 433 Hoiest balepensis Linn.	400
Hamburghin hanne Dank	394
(transition)	400
Polinskioldia sangunea Retz.	285
480 Hillianicia intercicula Dianela	321
202 Hordeam subsections	376
(Hatipitch) 199 (Hulbul)	
(Hazarman,) 320 (Hyacinth bean)	*64
Climan to the territory of the territory	26
EP T	
	- nt
Sargeticum Linn	3,00
Asrudalhagi Bieb. £23	
iriflorum Linn 123 HYDROCHARITACEAE	3.2
(Heeps) 65 Hydrocoryle america Linn.	. 70
Listing about a second	
Heliciana feora fina	229
Helioteres mora Linn	
Heliotropium eichweldi Steud. HYDROPHYLLACEAE	224
ex DC	269
strigosum Willd	261
Bubulatum Hochst, ex DC 226 Hymenatherum temufolium Cass	200
	207

Hel. Heli

	Par	pc .	Page
Ichnocuspus frusescens Alt. & Att.	E 21	1 v. hepaticijolio Cl	231
(1kh)	3*		234
Herebrum brachlatam Lina	29		216
Hyganthes parviflore Benth.	24	m	238
(Imil)	1.5		233
Imperata ermoleoren Cyrill	11	_	214
cylindrich Bessy	381		236
(inuian blackberry)	21		236
(include cores	28 26		215
((matrix Jejube)	70		216
(Indian mulet)	26		21
(inuan muberry	28		214
Indignicia amphaprista Stead	118		216
astragatina DC	148		291
cordifolal Heyne et Roth	17		60
enscaphylla Line	117	Isolopia raviei Nues	362
kirsuld seinu Baker	478	Isora coccinen Linn	8.
hochstetter: Baker	.14		4.7
amfone Retz	1,7		
uhlongifoda Forsk	112	facuranda aeut/folio auci	250
paicifella Dellie	1.2	mimosifotis D Don	249
netoria Lenn.	118	oralifolia R Br	259
tr ta Linn, E	18	Jack tree)	
(Indrayan)	171	Jacobinia tiectoria Herral	28
Ingo duleis Ward.	152	Jacquernonius pentantha G. Don.	268
Inula ladica Willd. , 🛕	193	(Jail	514
restita Wall.	193	Usichij	190
Ionidium anneaspermam Vent	86	(Jan)	3.2
heterophyllum Vent	66	Jab	1,20
suffruticonum Giag.	66	(Jackey)	210
Ipomoet angulata Lamb	213	(Jachariar)	254
nquatica Forsk	234	Uniboto	307
batates Lamie	2.15	(Jaldhania)	277
cairica Sweet	238		10
ealyema Cl.	235	(Jaljamina)	52
Carnes Jacq	234	Овиция	16
coccinea Cl	234	(land)	149
coptica Roth		Oangas zašebo	132
dissecta Willd	237	(Jangt) chachinda)	167
driocarpa R Br	237	(Jangli chora.)	
hederacea CL	234	Clangh hala)	307
hepaticifolia Linn	23#	Jangli karaunda)	57
hispida Roun & Schull	237	(Janagh kareja)	213
lobers Then.	235	(Jangh mothar)	169
muricata Jacq.,	233	(Jangh panak)	121
ni. Roth	233	(Jangh peyaz)	307
	238	4 Invalue 2	337
obscura Ker-Gawl	236	(Jangh tambaku)	242
polmeta Foruk		Jengi, tuisa)	286
Parish Date of the Sales		(Janti)	
per-lighdir Light .	238	(Japani sturood)	145
V. Capitellara CT.	637	(Jarui)	J 60
		Janminum aunculatum Vahi	263
		- and the Artis	208

## Perifix

	r <sub>éde</sub>		433
grandelenim Linn	na,		
her the Little of the Paris in Andr	70.7	OR as Sign	Page
officionale and a	794	Grading	
publication Wast	70.0	CK a frequency	7A 8
Antinhau A. F.	20 H	UKir	2
Jacob to By sound the Long.	114	TRACHE	727
Bastara las q	114	THE PERSON NAMED IN	E4
gaga agraet of a Activity y ward	194	Phase and the state of the stat	JA.
T miles;	460	Kikera,	65
Jen siden introducke)	27 00	(Kykin	9h
Jhad)		OSata anun o	16
Jhame)	143	then a house	7n 1 7
Jha	72	thata bharms	2 4
th nd)	402	Testla cheesa	284, 1 g
(heabra) [ 1	121 100	(K di tori) (Kama	_'R9
Jhanghas)	(24)	(Kamata, -	27
Jhunge) Jhunké i	117	(Kama(-kakri) (Kameda)	55
Janesia araca Roxb.	226	(Kamberla)	54
(Joeh)	72	(Kamuru)	225 294
(Jow)	70.5	(Kamrakh)	GT.
(Jowar)	176	(Kana)	92
Jumeia)	26	(Nanakchampa)	340 571
	126	(6.4ndiari)	85
JUNCACEAS	341	(Kandura)	55
Juncellus alapecia aldes Cl.	353	(Kaner)	71
luevigatus Cl.	153	(Kanghi)	2.5
рудтавих С).	357	(Kankanwa)	76 340
Juneus bafonius I mm	મા	(Kans)	371
Jussinea perengis Brenan	104	(Kasteri)	340
repens Linn	161	(Kanyeva chulay	196
Justicia acautts Linn (	266	(Kantevali sanchi)	99
adharoda Lann.	27	(Kanto ka sarpata)	246
hicalyculata Vahl	269	(Kanyo)	340
d ffass Willd.	271	(Karaunda) , (Karel)	214
echioides Limn,	268	(Karela)	65
gendarussa Burm, f	270		69
infundibuliformis Linn.	275	(Karera)	726
versess Vahl	275	(Karir)	65
Paniculara Burm. f.	_	(Karkonda)	.44
	268	(Kana)	298
Pretinata Linn	2"3	(Kasni)	90, 188
polyspermo Roxb.	269	(Kasambhi)	20
quinqueungularis Koen, ex Roxb.	278	(Kasondi) .	142
repens Lien,	270	(Katara) e e e	201
fimplex D. Don ,	271	(Kateli)	55 201 246
		(Kateri)	20
		(Kathal)	323
(Kabul, kikar)	146	(Kaunch)	,29
(Kachalu)		(Kaur-tamoa)	7,
Waster .	344		1
«/INIT)	17, 118	(Kauraa)	

	Page		Page
Kein)	333	(Kurum)	104, 201
(Kendu)	206, 201		197
Keora	344	(Kutru)	121
(Ketu)	122	(Kircia)	97
(Chapter)	343	Kyllinga beerifoila Rottb	354
Khajur) Ahanda.)	343 115	manocephala Noes monocephala Rottb	353
(Ahanaida)	69. 4 8	titeept Roub	353 153
(Khanjar)	209	Triarpe activity	,3,
Khachasa	169		
Khareni	75, 77 89	LABIATAE .	285
techureta kt ber,	53	Lobiah niger Med.k	131
(Khari n)	102	Lactors sativa Linn	88
(Khat gulen)	327	(Lady of the Night)	247
(Khat-mandari)	93	(Lady a finger)	26
(Khat-m'ttha)	93	Lagonaria vulgaria Ser	167
Khat ralak)	307	Lagerstroemus fins-reginae Retz	62
(Khatu	67, 248	iodka Linn.	162
(A. 1410la) (Khatta-mutha	88	apociosa Pers,	62
(Khatus)	93	thorelii Gagnep.	163
(Khesan)	302	Lagura Surita SchBip. ex Cl.	196
(Khip)	, 128	Lagurus cylindricus Linn	38
Fishira	113, 220	(Laham) .	337
(Khirai)	170	(Layvanii)	147
(Khubkalan)	205	(Lalbibi)	307
Khumbi,	. 58		
(Khurand)	255	LAMIACEAE ,	285
Aikais ramosasima Jaochen	, 83	(Lamp)	386, 398
(Kidney bean)	, 250	(Landas)	360
Kigelia pinnata DC	26	Lantana oculeata Linn.	277
(Kakar)	258	camara auct	277
(kikraonna	149	comora Linn	277
(Kuano)	213	camara v. acalcata Moldenko	777
(Karamar)	56	maica Kazb,	277
Kirganelia reticulata Bailt	. 308	(Laps),	300
carneth	320	Lapoogo biflora Roxh.	380
(Knol-kohl)	. 385, 390	(valuation)	379
Kochia Indica turi	61	12.450072)	
Rocieria phicaides Pers.	301	(Lanus)	228
(Kohendro)	. 402	Lateria chinensis Japa.	337
(Konpate)	295	Lathyrus uphaca Linn.	
(Kokanbari	404	SPAIN ON LINE	27
(Koknj)	102	(Laticania)	128
(Kowwastoras)	95	(Lauki)	261
(Krishna's buttercup)	69	Loungea asplealifolia Hook f.	167
Kudzu vine)	324	nudicaults Hook f.	189
Kulfai	130	Lawsonia afba Lamk	189
(Kumbh)	71	mercus Linh	162
(Kundra)	206	(Lenf mustard)	162
(Kundru)	295	(Leck)	27
(Kureh.,	171		337
4	216	(Leei)	117, 119
	210	Lemna paucicostata Hegelmaier	
		5	347

	180	(DEX	200
	Page		Proc
Polychica Linn	kgo,	displayed	10
PANALEAT		Chickery	41
(Lenon	LIII.	Ledware termideta um Linga	174
6) you make Marik	91	Lopulus aspes speciment Bolis	Hi
najenta Moench	1,3	Lange Lange	All: N
		I opinghou phirodes Round O oqua	402
UNTABLISHALLAL	254	11.00	25
ent (if	26	LURANTHACEAE	3177
Limiting apparent in the property of the party of the par	766	Loranthur fakatus Linn. t	109
a count is a statement with	9	American Design	109
to and a tem	b_	Ladreso par Africa Reich	Mil
vp against by openhaica Decile	22)	Per contr. Lings	164
retical and Will & App.	12	Luffs acutanguia (toxb	68
sporton Wa	724	enter in the g. M. II	68
Letter bina filiformis Hook \$	356	Schudosa Rosse	65
bun on Ohye	304	Cakara	153
CSLA)	7.02	(Laura)	
Leances	27	Lycium curopaeum Linn	
Leucacha granna Benuh	147	I scoperouse escalentum Mill	747
(dudycephala W	146	География В. Ф. на & Втома	247
eucas aspera Spreag	790	Lээтносты точного Lann.	257
dephalores Spreng.	280		
articaefolja R. Br	290	LYTHRACEAE	6
(A hissia)	295	Extheum feutierenn Lann.	. 162
Chasapp	228		
fLicht	104		
. II. ACC 45		(Machecha) 70,	
GUACEAE	735	(Machetis	305
Lima tean.	26	Morrowyx strigona Dalz .	. 12.
Limitonitiemain costation Griseb.	224	Madar	746
Limon quequifolia Christin	95	(Madha data	3
		Madhora indica I. F. Gime.	_ 204
Li NACLAE	90	latifolio Machide	204
Linaria ramosissima Wall	710	Maeriai armaria v. scabra Hook	
Lindenbergia indica Kuntze	155	f & Thoms.	6
geneaefalia Lehm.	250	Magantia grandifinra Lum.	. 5
cindernia ciliata Pennet	253		
crustucen F. Macli	252	MAGNOLIACEAE	
Japanica Thursh	252	Olahogamic	10
parvillare Haines	253	(Manua	41
Linesedy	26 90	(Mage)	
Linum us taussimum Linu	90	CMat dmar is	
Lippin nudylore A. Rich	276	(Mahkh	20
Life (1)	28	Makke	120 30
		Makaba	24
Litch chinensis Sonner	04		3
Lithospermum hispulissimium Lohm	227	(Malcott	
Livin and charenses R. Br	- 4	(Makra)	. 391 35
(Lobia,	113	(Mikriphii)	34
Lachnera pusilla K. Scham	48		
		MALPIGHTACEAR	4

## THE FLORA OF DEEPH

		Page	Pop
		The Manager Space of Contraction Land	
Maria merandan beliant Lino		TA suedifolyant Width	
mart offers Line		6 African Lann	
sy several finite		Mentha spice a film	
MAITACEAF		· supply found	-3
Mai vaceur a gomendelanum		New anches et arake Rough	41
( -arche		* My arrest impossible of Philaps	- 4
residential A Colar		T (Metha	
My various consults Consent		tu Metta	
(A sassacia)		as Aylean by ted	, ,
Manguera minea Linea	- 0	ni Mesenia reecta Benth	· .
nomenta l'unu f		ps (Mana)	"
Mariato	28 (	Michela champada I mo	
(Manua tamarind)		Mar sorgeo spottanato H n s	
Manifeace hexacides Dub	20	F N 2	
Maradema volubilis Cocke	74	4 Miliana minimum mit	
Mar ilea minuta Litto	F	v Stale La oralifona la re-	- 14
Martynia annua Linn	76	Milling on a hortensis one for	2
shand a Cites	-63	Manual Reviews of the	- 1
		Apr + AC + a fe	4
MARTYNIACEAE	26.3	Armesiana Lann	
Marua.	231		-43
1 Mesur	1.	ins Hora Sin	4.
1 ស្រីដូវែនរ	25	Inhan Lann	441
(Martar)	- 4		1
Mao,sam)	203	learneephala Lapik	4
Mayterus senegareuris Ben		Ascertions R 148	41
Mazus japoneus Kuntze	101	admaristant Lann 1	7.5
Pageons Lour	217	pricese Rinch	15
	232	PETERSON INCOME.	4
Medicago denticulata Wilki		cubicação Larreir	
540 va. Linn	74		43
(Mehndi	162	MIMOSACEAF	
Melaieum leucadendron Line.	159	Minnesops elengs \$100	149
Melanocenchies paraparental .		Araunda Rosh	Nij
Juop. & Spach.	574		205
royleana Nees ox Strad	325	Mina inhara Carv	21
Melanthese rhammordes fit		W rabba satpa Linn	792
feihania futteyporensia Munro	319	Ottoon	
or Mast		(Mirchi)	24%
	25	Mucanthus nepalensis Hack	203 (01
fomentasa Stocks ax Mast	81	(Miss)	fuel.
lena asadiroches Llan.	29	Offichi	269
azedarach Linn	99		1/5
		(Mchadaada)	
ELIACEAE		Chinha-moorn)	172
PERSONAL PROPERTY AND PROPERTY	94	(Maha mmbu)	A.
ofice Alt.	114	1 Militaryma manuf	95
arvillare Design	116	(Milragona parvilo in Komb	N.
erviflare Desf	116	, und Stall	206
COLCHERALDINE 1		(Mobile)	
1941)	¥6	(Mokb)	204
Others emidenepations Cogn	27		20
	166	MOUNTER	
HISPERMACEAE		MOLLUGINACEAE	173
THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM	525	MORNEO CENTERA See	
	**	Arra Thurb	\$74
			71

Mol (Mol Mela

MEN



## THE PROPERTY OF THE

*	Page		Page
		OROBANCHACEAL	-55
men three Min to F	Mrs	a subscribe degenhated PCF4	3
h care	208	technic Birch Mann CK MAND	24
P substitute Prints House L	A 14	Orope use thomseum I'm	- 4
July 4	14	custonition virginit Wt. & Am	.49
or our	54	Ophica mich mall day R vic et	
heropools it did	54	Henth	- ₹ Η
men more from a	- 44	Ciryan antive Links	407
Num by Ap	54	ONALIDACEAR	
year on Weldlo	14	Oxale constitutate Line	92
1000	41	corpodus DC.	Qn Qr
NAME OF ASSOCIATION	53 224	latifolia H B & K	9,
Nontaine tes crosserum Auntine	464	startings Zucy	*3
		ner-carede Land.	24
	26	Oxystelma esculentum R. Dr	2.8
rina 	9.5	secamone K. Schum.	2,8
Christ squarrosa Citor			
OC! NACEAU	38		
Orimini americanum Lian.	286	Fachyrhizet thenbergramer Sub.	
histographia.	286	& Zucc	GF.
синин Битв	256	(Palak)	304
grafescoure Lann.	287	(Falas)	.31
sanctum Linn.	287		
Ocnanthe javanica DC	178	PAZMAE	541
stolanifera DC 6	F78	(Passa)	27, 16
	. 80	(Panacholi)	77
Oldenlandia aspera DC:	190	(Fanachani)	226
corymbosa Ling, , , , ,	_ 180		
Ofea europsea Lina, , , ,	209	PANDANACEAE	3-4
		Pandagus fascicularis Lamb	3++
OLEACGAE	207	odoratissieus Roxb.	344
Oligomeria glaucesceus Camb.	. 66	tectorius Saland ex Balf f	344
(intfolja Macbride	66	(Panghas)	385
Children and a		(Pani)	
ONAGRACEAE ,	163	(Pam ki ghas)	69
(Onga)	271	Pannum adscendens H B & K.	164
(Omon)	27, 336	Antidotaic Retr	389
(Contiratela)	200	benghalense Spreng.	406
Operation turpethum Siba		burnaunii Reiz	405
Menso	231		394
CPRINTYRIAN MINISTRALIA Roselle	882	colomon Luna	393
CONTRACT STATE ANY DESCRIPTION AND ADDRESS OF THE PARTY O	211	romposition Lann.	394
(Abinita troppe)	36	compressum Forsic	390
Opening burnerst Berrie		corymbosum Rosb.	390
WATER COLUMN	394	erapath Linn.	
Opositio dilignit files.	394	ion tylon Linn.	393
elation Mill	172	distacks am Lunn .	390
	173	ettruum Necs & Arg.	188
DRCHIDACEAR		Houseless & Arg.	390
Fichio attentionmentes vices	332	Hartima Retz	392
Presidente regia H B. & K.	1)2	#Imcare Linn,	379
The state of the s	344	mateman Jacq.	405
		Stuare Latek,	
			406

**0**0 Орщ

ORC Orche Oread

#### District & 4.59 this is one for the Maria de la Maria Al Carrero de la P 404 for my a he designed a risk med. Commen. 44% of the Table 1911 n apf & Hubb at any lives who produced as a second · n ne gar D / 380 for mile. No. - 4 The section of 475 was him to monger trial . Carrierate to a way Partie now Demography of the Association of the Di-HT Chair in sp. to the se $d^2g(x_{i+1})$ $2x_1$ Part to the Bland Mit. dispa de en instera e i per-N F Wa & Am 2 8 PAPASERS LAD P - 2 MONTH OF THE 2 % Pr he be alvec a Need Pr a one a Kunize Patha 250 PART INACEA e de Paperni -Parm an Prof. & Pality and the man 1 66 P ora (Papm) Pr 197 37 Principal designation (State fillange. (Phek-pale) Papalaria er Julijna Forsk 3. 8 Phainte minut Rete Pura grassy 387 Paricinsonia acutenta Lim 40.7 234 Parmentiera cereafera Sonni. 87 257 Physical State Com Parof) + + + 74 161 Physics - a Parpaga, 754 Prosection accommission Jacq Parwat 132 27.16 1 C 1 B 1 Paspulidium flavidum A. Camus 147 Junatus Line. Paspolum distriction Line. 3, 1100 militarian assuring (Pattir ki bel 1.12 7.7 mungo Lina (Patera) 133 340 and the second (Pargizierr) 12 3.77 a dobas Air 12 (Patharchaga) 36% SALEST MISS 134 (Parju) 146 Phiomis expere Willia 290 (Puttan) 19 Phoenia dactyldera Liten 342 (Patter) rupscola T. Andem 343 Pavonia acylanica Cav. 77 gelvestris Roth 343 (Pawad) . . . . . . 121, 144 (Physigabhy) 61 (Pes) 4 - 4 . 26, 27 Phragmuter karke Trin. et Steut. 372 (Peach) maxima Bisti, & McC 28, 154 (Potr) 172 24 Physiahi) P 0 A 1 a s -56 (Pearl millet) 26 Marga San 22 (Phulanghas) 20% PEDALIACEAS . . . . 362 英国原则系列 197 Pedaljum mucia Linn. . . . . . 262 (Phuni) 70 (Pocia itaner) 214 136 (Phusar) . Peganum flarmala Lung. 92 Phyla nodelors Groone 2 6 2/2 Pritanthera sulunanea Roth Phyllanthia embles Lunn

#### Page Page 393 ne Motz 421 fintermit Alphases fewerin sin koco es Rosb SA4 360 THIA PAP h 2 Muniferatolisman inn 70,00 P 41 7,1 efrant Houle, E. Jan Profes. \$ .07 extremiatus Posts N 4 ct. \$4.5 ekantennin Reit 144 Performance professional alt uplen Reife. 41 negro Doj en 15 tok more Rose as W. Rd. Partingst av. 142 Physics - mental a little 5.3 P. storego publicarrown R. Chall 94 S. Miller CT. 14 441 (Path) amento a 🕽 🕬 44.5 Politica falm Species 22 4 6 guide the Polyaithia longifolds The elbin, ab 17) Polycarpage conymbose Lamk 118 147 Physics 1 60 Pelympron dysvession Robib 26 Ngerinjida 69 NoI indicate Merc (Citi obnimelia forflagil Edgew & Hack, f. 64 port The dudh is prostration Pay 69 327 ePilahan. 07 Polygola chinessis Latin 709 210 4 Pills 67 centalario des Buch. - Harr 32 Pour mahangkh Sorg. 176 encotern DC 67 Piper 68 v. vahnana Chouat. 101 Pirracia oleosa Laur. 67 Pitaret acvense Lann. STREET A TITLE 128 68 135 disphiosacs Widd. sativino Lien-Pitherelfobium duze Benth, 152 «Ропарада» 46 POLYGALACEAE 67 Pitranya 318 (Piyaz) 304 336 POLYGONACEAE Policonam nathanim Hook 1 306 PLANTAGENACEAE 22 sap gra- de chience. 30% Plantaly) irpagkalo Roxb. 291 решение и ина. 305 major Line. 2.2 fagogaram a min. 107 oveta Forsk 24 glabrian Walla 306

130

46

154

203

203

24

2 4

214

407

181

364

185

386

184

3:46

385

356

384

hydroptice Menso.

ianigerum R. Br.

plebouro R. Br.

(Pomegranate)

(Parebient)

serrousem Hora f.

Pongamus grabes Vent.

POYTEDERIACEAE

Porana paniculata Roub

oleracea Lina

quadrufide Linn.

Portulaci grandiflora Hook.

pignata Pairce

v domi Hook E

Polypogan monspetentis Desf

Pantederia emuiper Mart. .

surm Darmer

15 h means arpsin is territary

306

306

305

305

306

305

401

63

135

133

338

338

62

230

71

71

70

THE SECRE OF DEELE

Past

440

Plaso топохретна k ancie

Pluchea [anceousta C]

PLI MBAGINACEAE

Plumbago zevianica Lino.

rubra Linn. . . .

F acutifolis Woodson

Plumerta acutifotto Porc.

Post annua Long.

rillamenga Aus.

dlarrhong Schult

eraprositi Ling.

bitieria Vali

citians Lann.

panitred Retz.

pliosa Lion.

tenella Lina.

treamly Lamk

(Plamy

1		

#### Physical 4 PS N 1 ( 3 3 1 5 ) Page Prince Para se a septembriana la selfación Para sea de an 44 Report to entire the model had pr .... d some a policy A II, e H 10 de t leb to 14 al quality ferr to a promount of PROFILE OF BUILDING 93 145 Radian L. Is. 144 Pa v and haven in Conch. se ma Suig 245 H pr ų ž. Navige of all with the property of the 45 Ha 1 - 3 · The way the purcops 46 Panish 435 411 PROTEST ACEAL by ref. ۱'n Kanas amena Promise arrenance assessed Book f 154 RAN N A FAR domestics esp. Institute School Ran one you I n 1.4 bionita Lain 24 50 a printer to a set of the peratos Stokes 34 ME MU TO Psidium cattletamum Sabina 80,0 Tudyava Line 50 Ramp as a second Psoraies corvidous Linn 114 рисана Веше 24 119 Regality Pielon vircom Luin 101 Pierospermum acerifotium Willia 1 325 187 40 274 7. P. 4 302 45 Бь Watt r Pierygova slata R. B: 24 Raus sta set be more Biophines. Purcinta burters 5yd Kure Last Pueraria Airmon Schneid 30 Raman 3,5 shunbergama Henth 10 Hawasan Pulicazia angustafolia DC 91 Ha a 7-3 47 crups Sch.-Bip 190 they plant (Paramete) 28 748 (Man peoper) 31 (Rea pumpkus Pumpking 75 4. Punica granutum Lino 60 (REG SOTTO) Residency As - 45 61 PUNICACILAR Pupalin Impraces Just 300 RESEDACEAS -66 NAME OF Anabdockion riegeta Bours 100 (Puthkapida) 1 1 Purrardive nonburgha Wall. +01 RHAMNACEAE 352 Pycheus nitens Nees Rhameus minimutatia Britis F 10. 352 partiles Done 102 prospile Last 260 Pyrostegia venusta Muri-

### PERSONAL PROPERTY.

.4

IR A: R:

Ra

RU

Seco

	Phot		4.480
Wr. &		AND AND ROLL IN	570
Hites interacerate stayed on Wt. A.	406	. super firsts	4
On the state of th	1.0	epoint and the time	3 200
ny. n Die	151	eye banich	275
part of a de	11	(Sitted theola)	No
No Az ap	10	(Safe Epitou kof	H.T
and the second s	24	Nagataria guasanenan H & & K	541
В с ным эментогра I выя	116	(Sago pulm)	£ 1913
Rights)	114	(Separati	189
History	101 204	253256	914
R van hypocratestheinis Choste	231	(Satai) (Satah ki patuki)	54
11 marie & 103143	21 382	HOLLEGE BY DECEMBER	99
R h units)	149	SMCOOL	
N repl	15	BALICACBAE	330
<ul> <li>Nuppo Indiot Riera</li> <li>monrada Sinau</li> </ul>	55	Safer retrasportet Roub.	330
R vsa čanakstne K. Hr	154	Salmelia malabarica Sobott di	
dentificante de est	155	End.	80
orden Lan.	155	(Salpaini)	124
multifacts Thunb	154	Salsola baryosma Dandy	302
COLUMN S SPECIAL	*	facilda Delile	302
ROSACEAE	152	(Salpeak)	71
Koseller	79	Salvadora oleosdes Decne.	210
(Ruselle hemp)	26		209
Rostellaria diffusa Nees	271	perace Land.	207
quaquangularis New	271	SALVADORACEAE	500
Ranbaellie compressa Lina 1	381		209
Company of the Company	343	Salvia segyptiaca Linn.	268
Koyatones regia O.F Cook , .	343	V. pranife Hook. f	288
AUBLACEAE	270	plebeia R. Br.	288
Inclu kirin Vahl	379	atutolium(folia Boiss,	288
	272	(Sama)	391
kerrifolio Roxb.	257	(Simak)	393
рагива Зала.	273	(Sambhata)	281
prostrata Pote	273	Sant'mous aigra Linn,	179
Y desecta Cl	273	(San)	79
Inflicationsa Rosb.	200	(San hemp)	
tuberosa Linn.	265	(Step)	26, 113
tukhriy	196		31100
amon dentatus Lang.	307	(Sankhahuli)	117
ingle perriflere v. merelle Cl.	270	(Sanni)	113
V. Bectinata CI.		(otumili)	0.4
PROTESTA NAME	270	(Selecto)	176 305
errore None	269	(Santhi) 175	176 203
repons Noss	270		
Wells coccines Wests.	251	SAPINDACEAE	
quietifornus Schlechs.		Shrium schifenen in	169
Cham,	251	Sapium sebiforum Roxb,	317
were Zoos.	251	(Sapodita)	1125
	471	Seponarie recorde Line.	68
TACEAE .			
	94	SAPOTACRAE	
		Saraca Indica Luan.	
		(Sarai)	139
harum officinanus Lion.	371	(Sanhanda)	295
		(Sarkanda)	37
			31

#### Dank 40 Charle ata to make the Kings. de allega en sata ben No the St. der Heater No. of the last A the old per 47 4 4 4 4 4 7 N. WA N. 18 16 S. Barbandi materials how the Lane. XIII. N. Barrier 344 Scorner free and the 45 Redengton a remain to a Rashin 196 Cherrytons. 9.72 Schleichers denie Oken ( Super 23 164 · Bringway y wages the se - 94 Section with a proper (Store Primers 337 Series a nin Roch בייניביויני H6.2 Survey year in which u is a class. 161 Sola elbe Loss aptenharmacen Real 54 atods a Lope barbaras Roph Leg conditions a may distributed the 144 Floor of av terrigracus Linn 112 Erreichten Leuch & Perr is the de Noticed. 16.2 MOS 4 CIRC macroson Land 561 garmingly a Source May v affino Cl 162 RESERVED TO STATE quitiquerarius Buch Ham en COMPANIES AND A STATE OF Boerik 962 child and on their toylei Parker 362 (Sulk-out) 406 strubilinas Rosh 362 tuberosus Desf 363 STMARQUBACEAE Scrophularia chinensis Liau. 249 Senaper revision Labor. à (Singhara 24 SUROPHULARIACEAE 244 in (property property) 284 Sazurinega teucopyrus Muelt. (Saras) 151 5Z 57 310 Arg (Seen virous Pat & Hoffm 3 8 State deven Linn 3 48 Saymbran saferan Luis. (Sem): 8.3 58 THE STATE (Semal) 57 Senetiera pinnatifula Du (Suaphai) 178 - 6 Soon javanicum Bl. (Sengi) 334 Serptenda verticillata Lina. I MILLACACEAE 201 Secretalist arresport Lines 316 Smiles lewifolia Roth 25 March Potanie 135 problem Ross 262 Sesamum indiction Line. 3 107 (Soake gourd) 112 Serbania aculeura Pera. 1,5 Sadado decidur Forsk 130 angyprises Pert. 120 v. bicolor Wt. & Arn. 140 SOLANACEAL 130 V. gices Prain. Solvado Johna Murt 119 bispinosa Fawcett & Rendie 246 Solamum exculentum Dunal 130 244 sesban Merr. . . . . grandiflorum Ruiz & Pay 130 245 v. bloolor F.W. Andr. Indicum Lung 120 247 v. picta Santapau. Iresperseum Linu. 379 244 Seturia glauca Beauv. . . marriedon Datel 379 246 Intermedia Roem. & Schult. metongena Lago. 180 palistifusca Stapf & C.E. Hubb.

	Page		Page
	-343	STERCULIACIAL	83
ourset Line	246	Statisgia subjects Michigan	317
entre on 1948 Americalisticum Rasab	246	Southern See Laur	329
air tons De - L	245	Serga gupha animides Bross.	251
DEL PURI SIA	346	Suseda Zurkerea Pürik	300
inhenium List.	364	mareana Damer	505
gugenen though.	344	(Suppressed)	26
sanchocuroum & head & Wend	245	(Sur &a poil)	198
Satispago camadinasis Linus	191	(Sakhdarahan)	334
Sonohus unventile Linn	190	Marine	374
asper Hill	190	(Sweet Lived)	94
elements Linu.	190	Saletenia muhagami Jacu	100
v. arger Lans.	390	Syzygrum cumini Sker a	160
(5067)	377	Januarian DC.	160
(Sunina)	100		
Suphera se unsil lora Lag ex DC	136		
Iomenfosa Lino	135	Tabebusa pentaphylla Hennil.	257
Sorghum hatepetise Pers.	400	Tabernaemontana coronaria Willd.	215
vulgure Peru.	400	Simulated R. M.	215
(Sour Lime)	94		
(Sour attarge)	28	TASK BORTON FLOR	71
(Serwa)	179	(Tamurind)	29
Manufacture of the last	69	Taparindes indica Line.	139
	181		72
The state of the s	150	Tamarix aphylla Lanza	
		nencajana Vahl	72
Sphesoclea zvylanica Gaerre	203	diosca Reab.	72
CONTRACTOR OF COLUMN AND ADDRESS OF COLUMN A	No.	paltica auct.	71
SPHENOCLEACEAE	303	going Linn	72
Spinach)	27	French How	77
Spinacia oferaces Limi.	364	(Tanutar)	247
Spirees cantonierous Lour	153	(Tambakoo)	191
corymbons Roxb	153		242, 243
Spirodela polyrrhiza Schleid	346	(Tundla) .	295
Spirogree sp	30	(Tam)	
Spondias margifere Wills	105	(Terranica)	62
Marrie Ware			62
Sporobolus coromandelianus	105	(Taraten).	63
		(Tarboor)	171
E seeds	404	(Tarbora)	171
dlander Reauv	403	(Teanklo)	211
Estileularus Noes ex Aitchis	404	TANKS TO THE PARTY OF THE PARTY	
marginatus Rochis, ex A. Rich.	404		261
trepolar Kenth	404	grand/Ava Loisel.	261
(Squaah)		pentaphylla Just.	257
	172	redicate Just	261
Stuchytarpheta fulles Vahl	285	State H.B. & K.	
jámelomus Vahi	285	to madel the traff	
Stellaris media Vill.	68	and a second	258
Stenolobium stats Seem.	258	Technolog G Dos	257
Stenhangtle floribunds flori		Tecomerie capensis Spuch	261
Stephegyne purifolia Korth.	221	Tocornella undolata Seem	257
Steroulis where Burk	1112	Tectons granda Linn, f.	280
Sterculis alota Roxb.	86	(Tetpatiya)	
trichosiphan Benth.	3.0		93
orem Roxb.	- 64	(Tendo)	219
	arant .	(Tendu)	171



#### PARTIEN Page 445 (Tenso Tephtoxia Duming Pers ATT Fragus Bridgings & Road Page purpuren Pers. 1. Sumila Baker 121 821 TRAFACTAE congresa Samapan & Malire 121 Printelessa Crystalian Valu count Wall 121 ereinfor Rock-Ham et G. Den enfosa Pers. 721 mangens Less 121 175 Proposite and Terminalia arjung Wil & Arn. Hite 1746 proceeding and new York. bellinks Rosk Acres Wt. & Arn. 236 1715 Fribulai tonasoris Linn 176 155 Francisco applemente Roto glabre Wr. & Arm 500 156 reference v. mende empole Courie ... 326 156 Digital contains suggested Little Tetrapogios tenellus Oxiov. 336 recursoring Line. The second second by 375 Linea Rossis. Linear productions Line divine Rosts. 375 1406 The pesia pepsines Solgad, ex-33 Galotus sirvanda naes Lain 199 Priporetta corpuedata Lina. 105 Core Sommers-grandoms, Linco. Thereta merufally June at Stead 135 294 ochu Berah DX1 perususa Merr. 214 (1007) (Timar) (Physic orweitsh's Lian 31 1115 Telescent sentiment Line. 336 100 Francisco Savernin Ling. Thurbergia creeta F. Anders rhomboides have Frephis espara Rata Fubilismo arealis Kuntze 100 263 frageans augs. 39 253 fragrans v. facres Cl. 129 263 grandidore Roxb 246 (Tabe) 287 (Tabeband) 286 (Tabeband) 217 (Termp) 27, 60 263 There aphylla Linn There aphylla Linn There canthur strictus Noes There can be seen to the same of the 263 267 372 Estophora autometra Wt. & Arn. 230 372 undics Mers. 220 provera Mez 372 Trona meutata Bory & Chaub. 145 (Tib) 351 straturates Gr. 344 TILIACEAE 85 53 344 Tillacora acumigata Miers . TYPHACEAE nacemosa Colebr. (Tinda) 341 53. Typhonium tellohatum Schott 172 33 Tinospora cordifolia Miers (Usekanshal) 15 (Tomatar) 243 48 247 (Tomato) 100 (Toon) 321 ULMACEAE Ulmas integrificijo Rusb 100 Toons gilinta Room. 324 328 168 (Ton) 436 UMBELLIFERAL Trachelospermum Jasminoides Lens Unicio bioconera Linn. 395 2112 407 177 85 Тевскупроговить влин Эргадио (Untkolera) 340 133 Tradescantia axillaris Lina 350 Urena Inbeta Lian Tragus biflorus Schult 380 rucemarus Hook, f.

# THE FLORA OF DISLAM

440

F

the

so sue ft

440			age:
	Page		or little
	77	4 Y 4 HOURS DUSTES	133
material Rock	31	(Vizaye gubbitu)	26.2
Lyamus salas Kupib	332	(Vikayes amist	152
Conclus remaindables v pullments		(Vitayle (hau)	117
Most and the latest terminal to the latest terminal termi	296	(Vitagui Josephu)	138
pulsacini Kunth	776	(Villagi melindi)	104
I more our constitution Mig.	325	(Vilayti san)	37
resignation Charles	123	Place pentile Mare	211
(Lers outdurk	98	Mole convergerme Link.	66
(Lyro) Gregolacia General Valu	256	7 10-10-10-10-10-10-10-10-10-10-10-10-10-1	
e treignjaria flexionsa Vafe	255	VIOLACEAE	66
infless Cl	256		
The same of the sa		VITACEAE	102
		Vitex agricus cantils Linn.	281
Vaccaria dyramichata Medik.	#6K	negoraki Lina	102
Vallaris heyers Syvenst	252	You comme Wall	102
solariaces Kimtre	272	trifiche Lintt	103
Vallementa spiralis Limit	331	violiera Linn.	283
vertà illoro Ruxb.	331	Volumeria ciernas I inn. Volumeria directoro Benth. &	Me1-1
Lambellus brachsoro Haines	253		202
cynsterva Benth	253	Hook f	202
(Vegetable marrow)	172	rammen Santaratu	9.61-0
Verbiscum chinense Santapur	249		
thapses Lines	249	(Water-cress)	58
Verbona bipanaatifida Scham	276	attack a market	338
inemirends Lim	235		1. 171
modifiero Lina	276		26
wilematis Linn	275	(Wheat)	369
LEBOURICELE	275	(Apple melpers)	29
VERBENACEAE	197	Withama somnifera Damal	241
Verbesina hosvallea Linti I.	531		50.
encelleides Benth. & Hook, f.	****	Walfin sp. (microscopics Kurz)	347
es A. Gray	199	Woodfordin florthwode Sallisti.	162
priparted Jacq.	199	fruticom Kurz	161
oncophora Robins, & Sess.	199	Wrightin tinctoria R. Rr	216
prostrutu Lina	197		
Vernonia cinerea Less	190	with the same of t	
Vertenics agrentic Line.	254	Kanthiam disumarium Line	296
anagulis-aquatica Linn.	255	Ximenesia excellendes Cov.	199
Vetiveria zizantoldes Nash	402		
Vicin fava Linn	126		
hirtura S. F. Gray	126	(Yant)	27
saffes Ling.	127	(Yellow oleander)	214
Vicon ourleabure Cons.	193	Youngia juponica DC syn	-14
makes DC.	193	ienanies	400
crifts Benth es Hook f.	193	Japonica Viscon Alaskan I I I I	188
Vigna entlying Walp.		Yucca ploriosa Linn.	334
sindania Sayl on Handy	133		
Legendrale hade-short to be made	133		
Viguleria hollantholdes H.B. & K.	19K		
(Vilnii) bebul)	148	(Zaminkand)	346
(Vilum kaddo)	172	Zannichella paluxiris Linn	340
		Annual Pages 15 15	226

